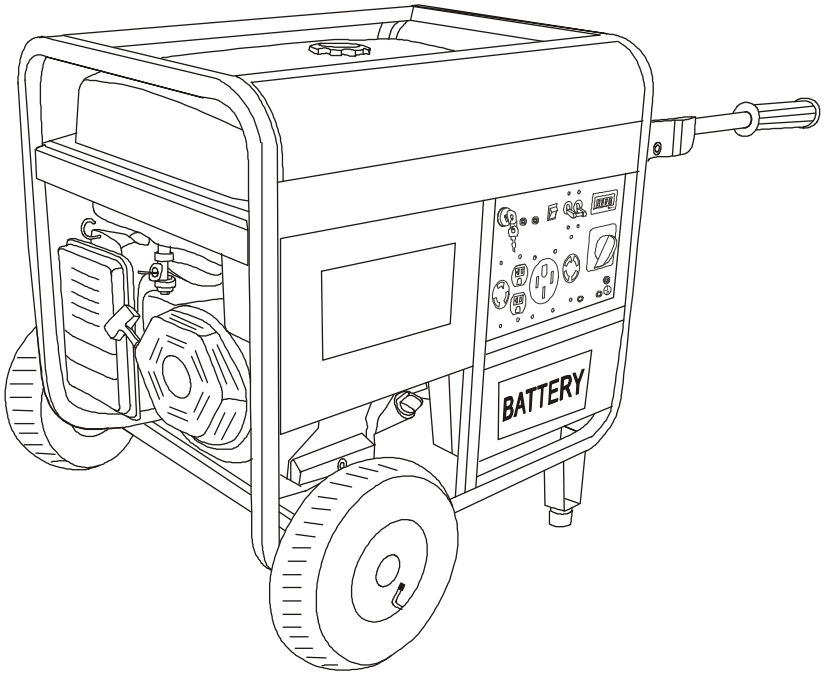
PowerLand

Owner's Manual



Full Power Output Panel

SERIES GASOLINE, LPG, NG POWER

GENERATOR

THANK YOU FOR BUYING *PowerLand* INDUSTRIAL TOOLS

SAVE THIS MANUAL FOR FUTURE REFERENCE

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Toll Free: 1-888-807-6660

WARNING
To reduce risk of injury, everyone using, installing, repairing, maintaining, changing accessories on, or working near this tool must read and understand these instructions before performing any such task.

This manual provides information regarding the operation and maintenance of these products. We have made every effort to ensure the accuracy of the information in this r
We reserve the right to change this product at any time without prior notice.

Please keep this manual available to all users during the entire life of the GASOLINE NG generator.

SPECIFICATIONS

Item		PD3G4400E	PD3G6500E	PD3G8500E	PD3G10000E
Generator	Rated Wattage	3500 W	5500 W	7000 W	8000 W
	Surge Wattage	4400 W	6500 W	8500 W	10000 W
	Rated Voltage	120/240 V			
	Rated Frequency	60 Hz			
	Phase	Single			
	DC Output	DC 12V/8.3 A			
Engine	Engine type	4-stroke OHV single cylinder with forced air cooling system			
	Ignition system	Transistorized magneto			
	Spark Plug	NGK BPR6ES, F7RTC			
	Engine Speed	3600 rpm			
	Compression Ratio	8.5 : 1	8.0 : 1		
	Displacement	208 cc	419 cc		
	Starting type	Electric start /Recoil			
	Fuel	Use clean, fresh, regular LPG with LPG gas pressure area: 10~15 PSI.			
		Use clean, fresh, regular Natural Gas with NG gas pressure area: 0.25 PSI.			
		Use gasoline with a pump octane rating of 86 or higher			
	Oil capacity	0.63 US qt (0.6 L)	1.2 US qt (1.1 L)		
	Engine oil grade	SAE 10W30 SG or SF or SN			
	Valve Clearance	Intake 0.10-0.15 mm (0.004 – 0.006 in.) Exhaust 0.15-0.20 mm (0.006 – 0.008 in.)			
	Noise Level	75 dB @ 7 m (22 feet)			
Dimensions (in):		28" × 21.6" × 22.6"	30.2" × 22.5" × 24.2"		30.3"X28.7"X 25.2"

⚠ WARNING: ⚠

The engine exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

WARNING:

The generator is a potential source of electrical shock if misused. Do not expose the generator to moisture, rain or snow. Do not let the generator get wet, and do not operate it with wet hands.

Keep this owner's manual handy, so you can refer to it at any time. This owner's manual is considered a permanent part of the generator and should remain with the generator if resold.

Congratulations on your selection of our generator. We are certain you will be pleased with your purchase of one of the finest generators on the market.

We want to help you get the best results from your new generator and to operate it safely. This manual contains the information on how to do that, please read it carefully.

As you read this manual, you will find information preceded by a symbol. That information is intended to help you avoid damage to your generator, other property, or the environment.

When your generator needs scheduled maintenance, keep in mind that our servicing dealer is specially trained in servicing our generators. Your authorized our servicing dealer is dedicated to your satisfaction and will be pleased to answer your questions and concerns.

A FEW WORDS ABOUT SAFETY

Your safety and the safety of others is very important. And using this generator safely is an important responsibility.

To help you make informed decisions about safety, we have provided operating procedures and other information on labels and in this manual. This information alerts you to potential hazards that could hurt you or others.

Of course, it is not practical or possible to warn you about all the hazards associated with operating or maintaining a generator. You must use your own good judgment.

You will find important safety information in a variety of forms, including;

·**Safety Labels** — on the generator.

·**Safety Messages** — Preceded by a safety alert symbol and one of three signal words, **DANGER, WARNING, or CAUTION.**

These signal words mean:

DANGER: You **WILL** be **KILLED** or **SERIOUSLY HURT** if you don't follow instructions.
WARNING: You **WILL** be **KILLED** or **SERIOUSLY HURT** if you don't follow instructions.
CAUTION: You **CAN** be **HURT** if you don't follow instructions.
·**Safety Headings** — such as **IMPORTANT SAFETY INFORMATION.**
·**Safety Section** — such as **GENERTOR SAPETY.**
·**Instructions** — how to use this generator correctly and safely.
This entire book is filled with important safety information — please read it carefully.

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SAFETY

SAFETY INFORMATION

Our generators are designed to give safe and dependable service if operated according to instructions. Reed and understand this owner's manual before operating your generator. You can help prevent accidents by being familiar with your generator's controls, and by observing safe operating procedures.

Operator Responsibility

- Know how to stop the generator quickly in case of emergency.
- Understand the use of all generator controls, output receptacles, and connections.
- Be sure that anyone who operates the generator receives proper instruction. Do not let children operate the generator without parental supervision.

Carbon Monoxide Hazards

- Exhaust contains poisonous carbon monoxide, a colorless and odorless gas. Breathing exhaust can cause loss of consciousness and may lead to death.
- If you run the generator in an area that is confined, or even partially enclosed, the air you breathe could contain a dangerous amount of exhaust gas. To keep exhaust gas from building up, provide adequate ventilation.

Electric Shock Hazards

- The generator produces enough electric power to cause a serious shock or electrocution if misused.
- Using a generator or electrical appliance in wet conditions, such as rain or snow, or near a pool or sprinkler system, or when your hands are wet, could result in electrocution. Keep the generator dry.
- If the generator is stored outdoors, unprotected from the weather, check all electrical components on the control panel, before each use. Moisture or ice can cause a malfunction or short circuit in electrical components which could result in electrocution.
- Do not connect to a building's electrical system unless an isolation switch has been installed by a qualified electrician.

Fire and Burn Hazards

· The exhaust system gets hot enough to ignite some materials.

— Keep the generator at least 1 meter (3 feet) away from buildings and other equipment during operation.

— Do not enclose the generator in any structure.

— Keep flammable materials away from the generator.

· The muffler becomes very hot during operation and remains hot for a while after stopping the engine. Be careful not to touch the muffler while it is hot. Let the engine cool before storing the generator indoors.

· Gasoline is extremely flammable and is explosive under certain conditions. Do not smoke or allow flames or sparks where the generator is refueled or where gasoline is stored. Refuel in a well-ventilated area with the engine stopped.

· Fuel vapors are extremely flammable and may ignite after the engine has started. Make sure that any spilled fuel has been wiped up before starting the generator.

· Always keep fuel away from sparks, open flames, pilot lights, heat and other sources of ignition.

· DO NOT light or smoke cigarettes.

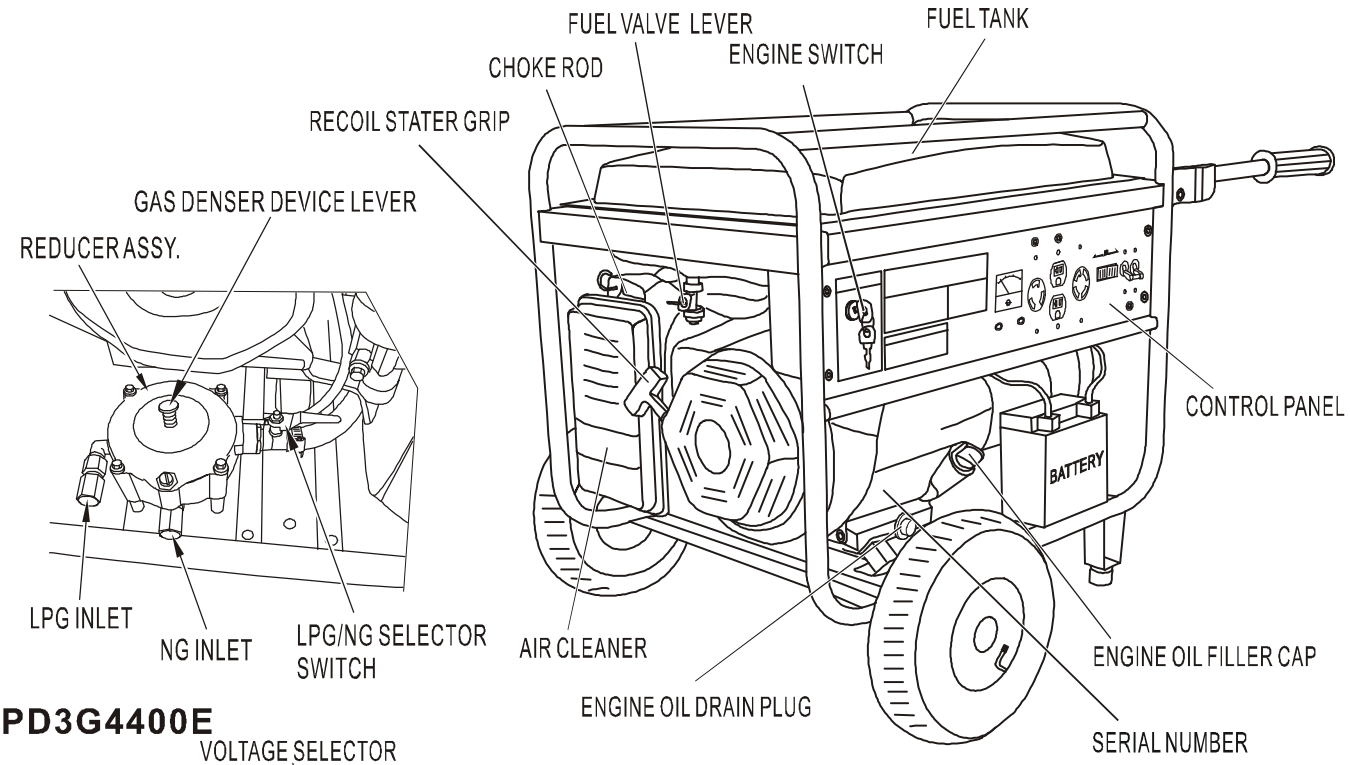
WARNI**NG:** When use the LPG generator, if find any problems(LPG leakage or strange smells), please turn off the gas source immediately and then check the connection hose to insure the safely.

WARNING: 1. When using the LPG/Gasoline generator, please be sure that there is at least 5 feet distance between LGP tank connecting hose and the generator, to prevent unnecessary danger because of high temperature surface of LGP tank.

2. When using the unit, please check the surface temperature of LPG tank.

3. Don't place the LPG tank in one place where ambient temperature above 35℃ and use LPG for electricity generating.

COMPONENT IDENTIFICATION



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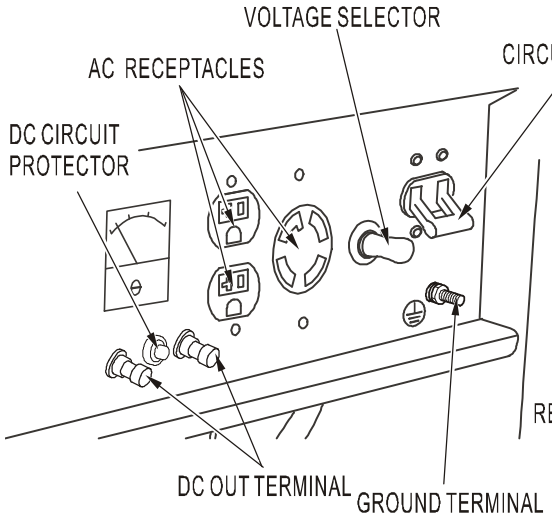

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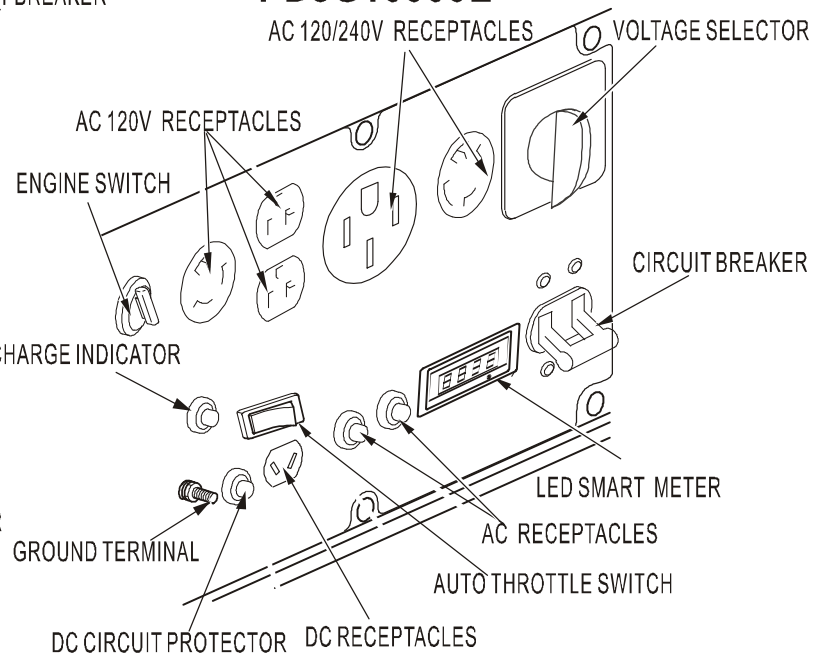
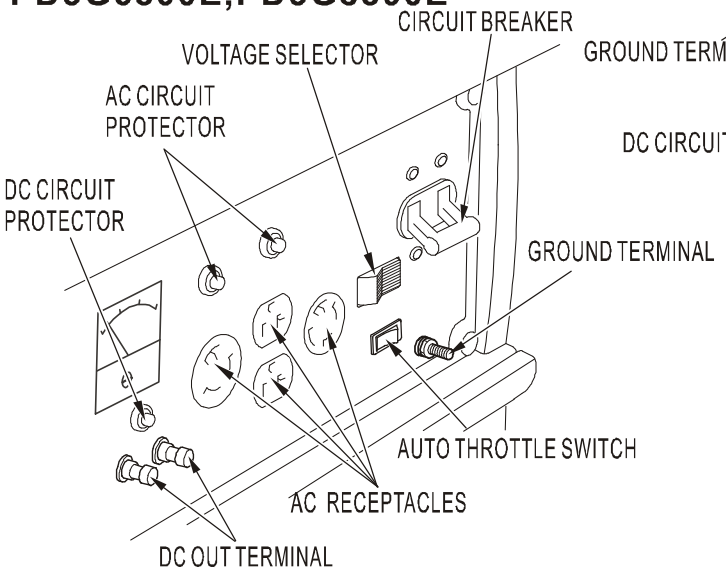


PD3G6500E,PD3G8500E



Record the engine and frame serial numbers for your future reference. Refer to these serial numbers when ordering parts, and when making technica warranty inquiries.

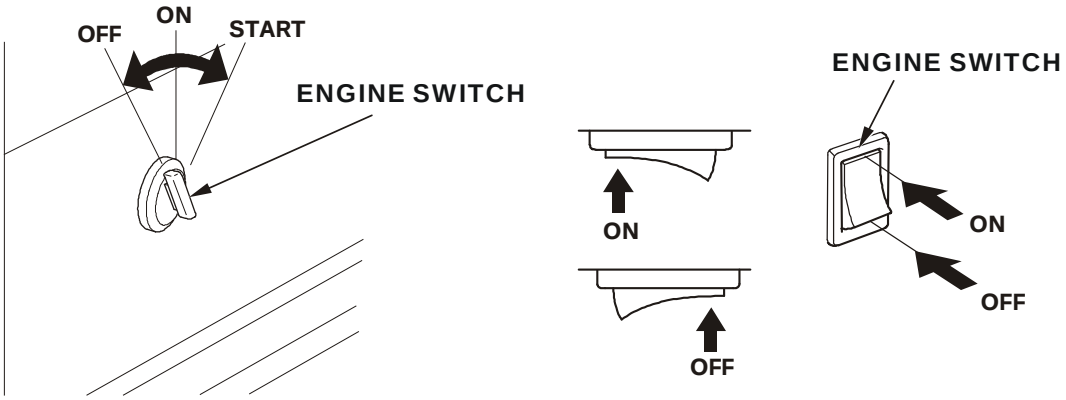
CONTROLS

Engine Switch

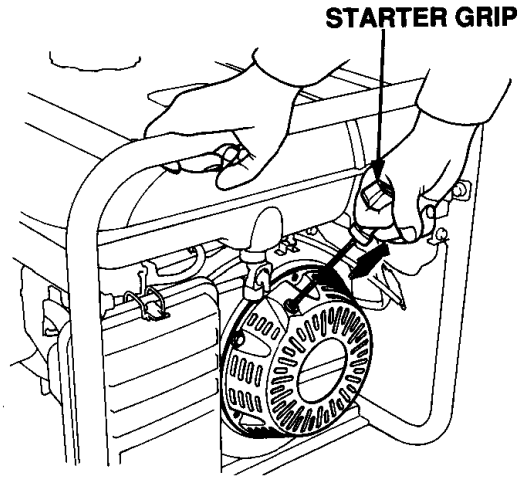
To start and stop the engine

Switch position:

OFF: To stop the engine. Key can be removed/inserted.
ON: To run the engine after starting.
START: To start the engine by operating the starter motor.



Recoil Starter



Turn engine switch to “ON”

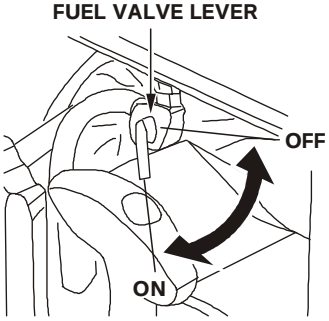
To start the engine, pull the starter grip lightly until resistance is felt, then pull briskly.

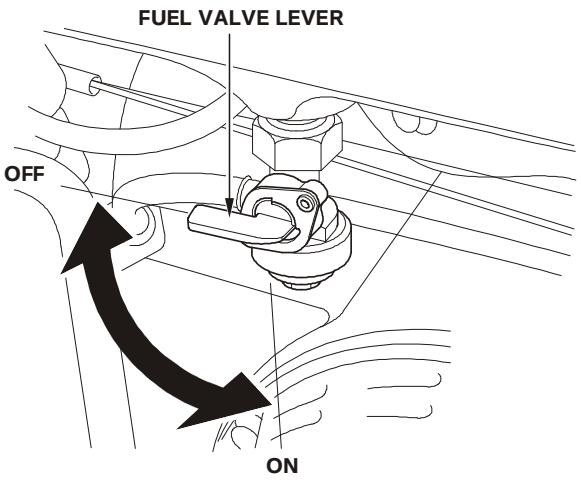
NOTICE: *Do not allow the starter grip to snap back against the engine. Return it gently to prevent damage to the starter.*

The recoil starter is used to start the engine if the generator is not equipped with a 12 volt battery to operate the starter motor, or if the battery does not contain adequate charge to operate the starter motor.

Fuel Valve Lever

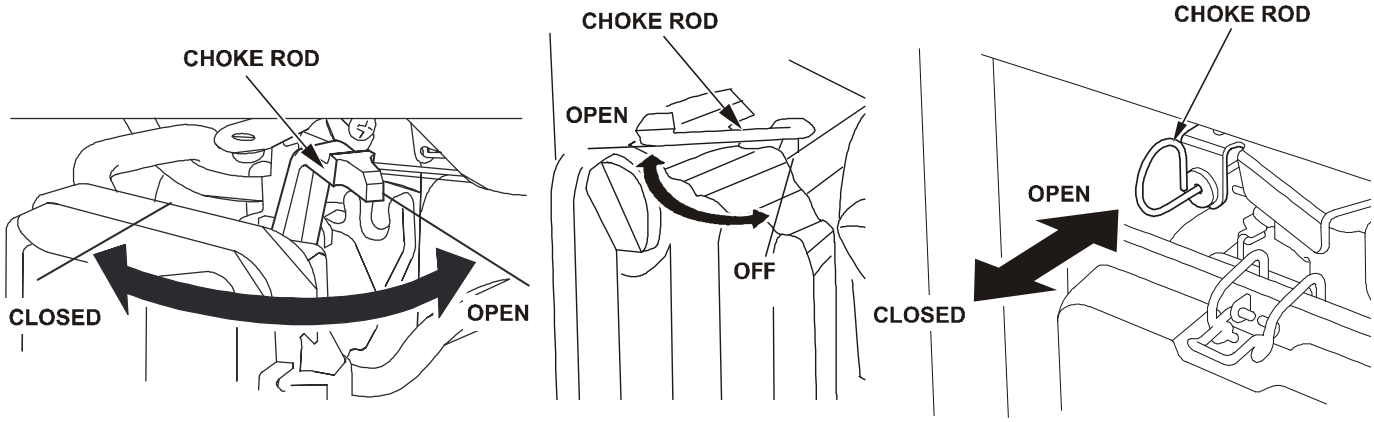
The fuel valve is located between the fuel tank and carburetor. When the fuel valve lever is in the ON position, fuel is allowed to flow from the fuel tank to the carburetor. Be sure to return the fuel lever to the OFF position after stopping the engine.





Choke Rod

The choke is used to provide an enriched fuel mixture when starting a cold engine. It can be opened and closed by operating the choke lever manually. Move the choke lever or pull the choke rod out to the CLOSED position to enrich the mixture for cold starting.

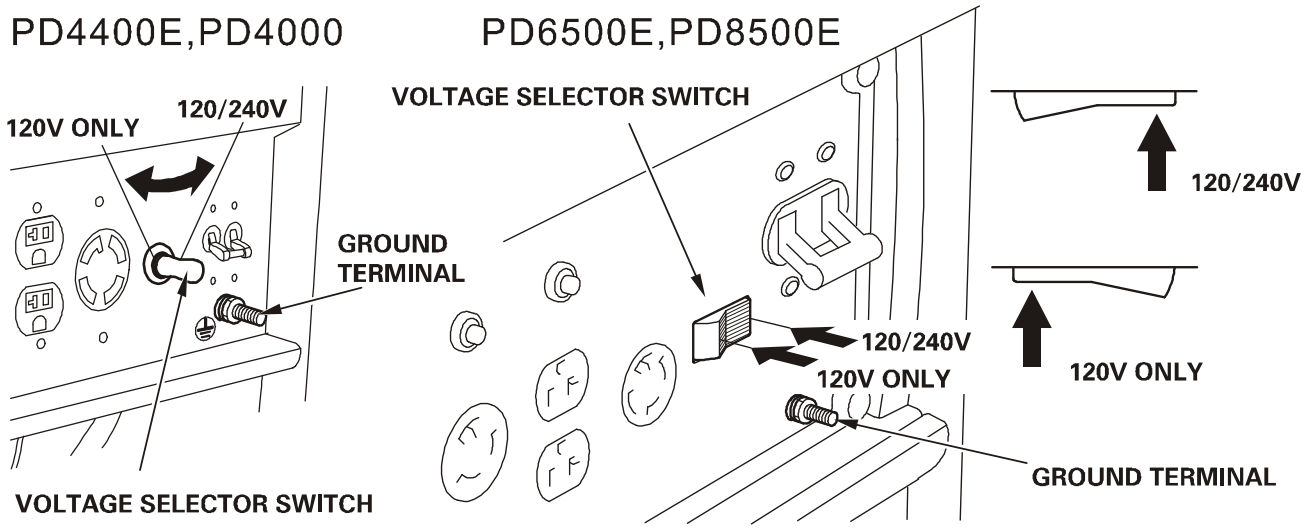


Voltage Selector Switch

The voltage selector switches the main power carrying windings of the generator to produce "120V ONLY" or "120/240V". If a 240V appliance is connected to the 4-prong receptacle, the switch must be in the "120/240V" position. If only a 120V appliance is being connected to any of the 120V 3-prong receptacles, select the "120V ONLY" position.

120/240V: The 120V and 120/240V receptacles can be used simultaneously. 120V Receptacles only can output half of the rated power.

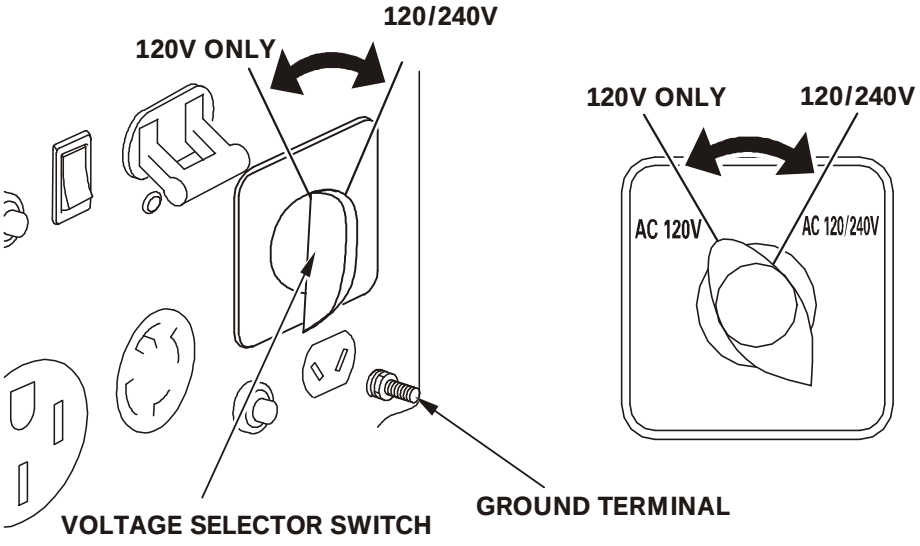
120V ONLY: ONLY the 120V receptacles can be used. Do not use the 120/240V receptacle in this position. Rated power will be available at the 120V twist lock receptacle. The most power will be available at the 30A 120V locking plug receptacle.



WARNING：Change the Voltage Selector Switch after turning the AC ci

breaker to OFF. The generator may be damaged.

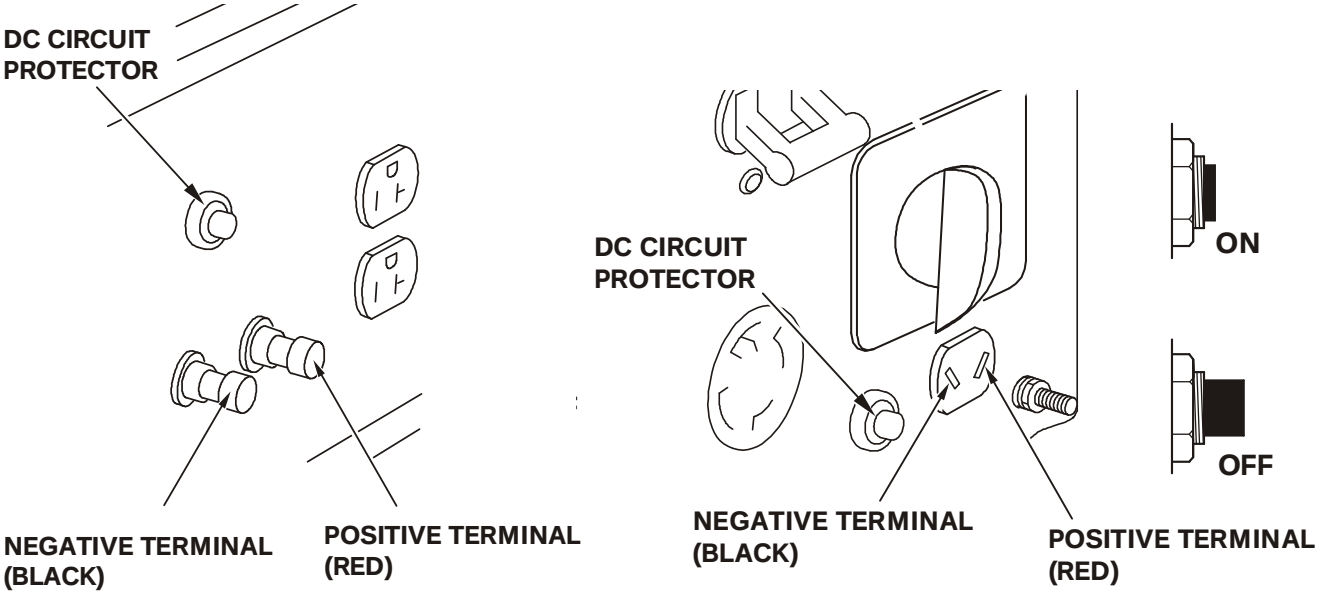
Before using the ground terminal, consult a qualified electrician, electrical inspector or local agency having jurisdiction for local codes or ordinances that apply to the intended use of the generator.



DC Terminals

The DC terminals may ONLY be used for charging 12 volt automotive type batteries.

The terminals are colored, red will identify the positive (+) terminal and black will identify the negative (−) terminal. The battery must be connected to the generator DC terminals with the proper polarity (battery positive must be connected to the generator red terminal and battery negative must be connected to the generator black terminal).



DC Circuit Protector

The DC circuit protector automatically shuts off the DC battery charging circuit when the DC charging circuit is overloaded, when there is a problem with the battery, or when the connections between the battery and the generator are improper.

Oil Alert System

The Oil Alert System is designed to prevent engine damage caused by an insufficient of oil in the crankcase. Before the oil level in the crankcase can fall below a safety limit, the oil alert system will automatically stop the engine (the engine switch will remain in the ON posi
the engine stops and will not restart, check the engine oil level before troubleshooting i
areas.

Auto Throttle System

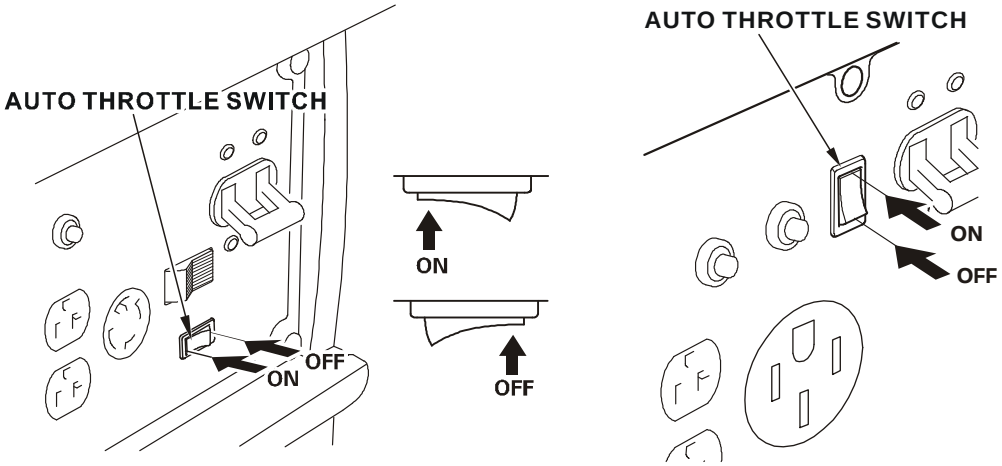
The auto throttle system automatically reduces engine speed when all loads (i.e.: tools and appliances) are turned off or disconnected. When loads are turned on or reconnected, the engine returns to the rated speed.

Switch Position

ON: Recommended to minimize fuel consumption and further reduce noise levels when no load is applied to the generator. The auto throttle system does not operate.

OFF: Recommended to minimize warm-up time when the generator is started and starting load with large start-up power equipments.

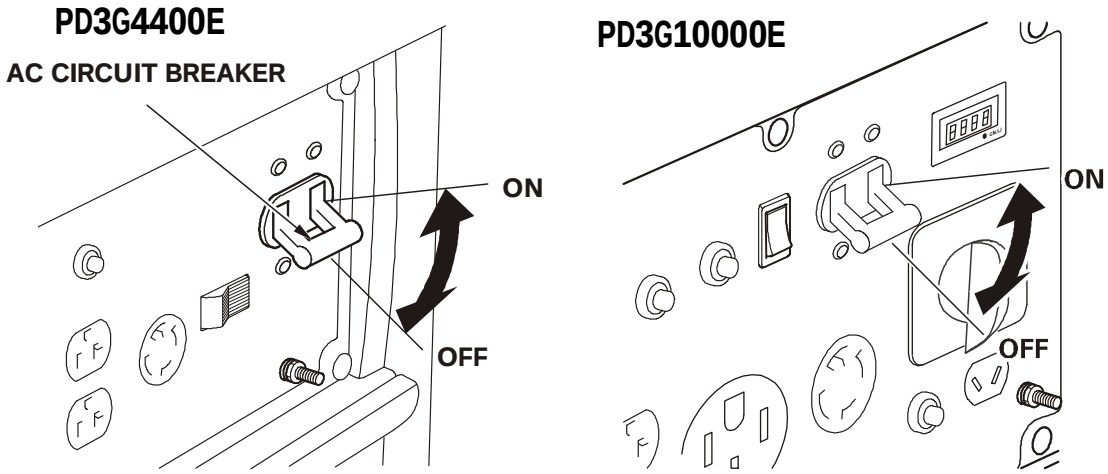
***NOTICE:** If connect to a residence, it is recommended that the auto throttle be kept in the "ON" position if less than 50% load is being used. If the generator will be running over 50% it is recommended that you switch to the "OFF" position.



AC Circuit Breaker

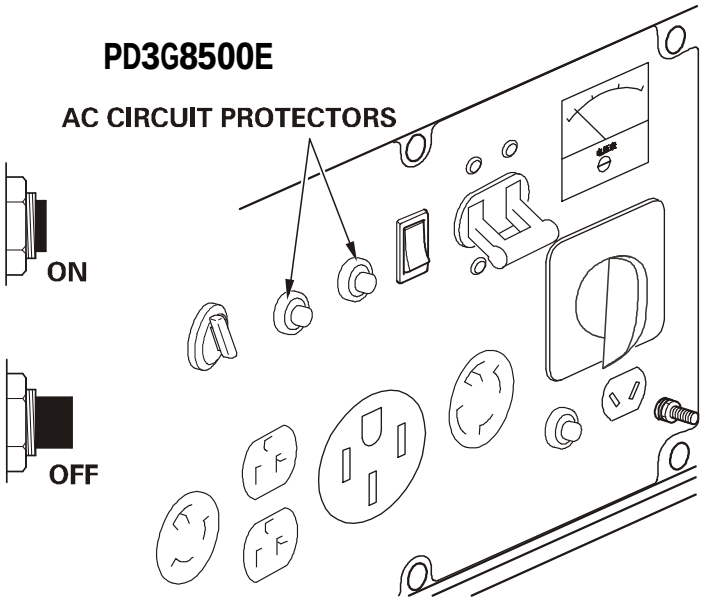
The circuit breaker must be in the "ON" position in order to start running a load, but it will automatically switch "OFF" if there is a short circuit or a significant overload of the generator at the receptacle. If the circuit breaker is switched OFF automatically, check that the appliance is working properly and does not exceed the rated load capacity of the circuit before switching the circuit breaker ON again.

***The circuit breaker may be used to switch the generator power ON or OFF.**



AC Circuit Protector

The AC circuit protectors will automatically switch OFF if there is a short circuit or a significant overload of the generator at the 20A 120V, 30A 120V locking plug, or 120/240V locking plug receptacle. If a AC circuit protector switches OFF automatically, check that the appliance is working properly and does not exceed the rated load capacity of the circuit before resetting the AC circuit protector ON.

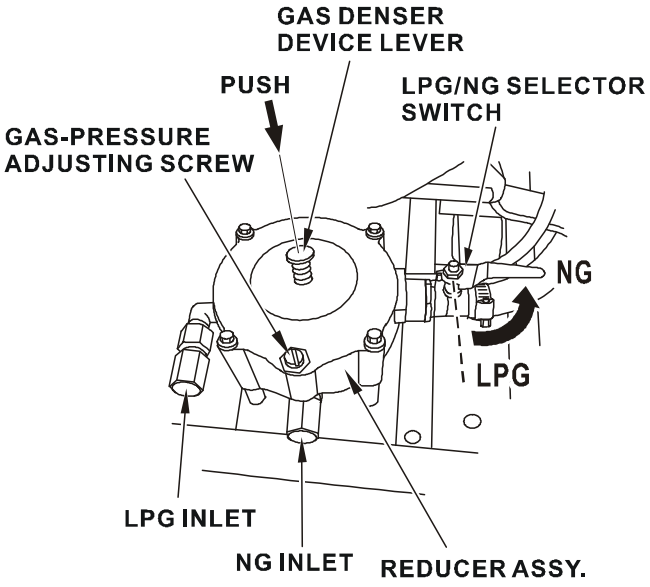


Gas Denser Device

To develop cold start performance of LPG/NG generator unit, the air REDUCER ASSY includes one gas denser device lever, the detailed operation of the bottom is as below.

Choose the connector according to the gas you use：

- If you use LPG, you need to put the LPG hose to the LPG inlet, make the NG inlet screw and seal well with the nut and turn the LPG/NG selector switch to LPG position.
- If you use NG, you need to put the NG hose to the NG inlet, make the LPG inlet screw and seal well with the nut and turn the LPG/NG selector switch to the NG position.



When start the cold LPG/NG generator unit, open the valve of LPG tank or NG source, close the resistance air valve handle, push the gas denser device lever lightly, and keep 1-2 seconds, then stop, and then start the engine normally.

CAUTION: Improper treatment or use of the generator can damage it, shorten its life and void your warranty

- The gas denser device lever only does work after turning on the gas source valve, if start normally, no need pull the lever, otherwise it will cause generator unit work abnormally;
- When push the gas denser device lever, the keeping time must not over 2 seconds, otherwise it is not good for start; No need to push the gas denser device lever at every start, only need to use when the first start of the cold generator unit or when need to change Gas;
- If with abnormality, please contact us;

- Prohibit adjusting the LPG gas-pressure adjusting screw and gas flow adjusting screw.

GENERATOR USE

Connections to a Building Electrical System

Connections for standby power to a building electrical system must be made by a qualified electrician. The connection must isolate the generator power from utility power, and must comply with all applicable laws and electrical codes.

WARNING: Improper connections to a building electrical system will allow electrical current from the generator to back feed into the utility lines. Such back feed will electrocute utility company workers or others who contact the lines during a power outage, and the generator may explode, burn, or cause fires when utility power is restored. Consult the utility company or a qualified electrician.

Ground System

Generators have a system circuit that connects generator frame components to the ground terminals in the AC output receptacles. The system circuit is not connected to the AC neutral wire. If the generator is tested by a receptacle tester, it will show the same ground circuit condition as for a home receptacle.

AC Applications

Before connecting an appliance or power cord to the generator:

- Make sure that it is in good working order. Faulty appliances or power cords can become hazardous and cause electrocution.
- If an appliance begins to operate abnormally, operates sluggish or stops suddenly, turn it off immediately. Disconnect the appliance, and determine whether the problem is the appliance, or if the rated load capacity of the generator has been exceeded.
- Make sure that the electrical rating of the tool or appliance does not exceed that of the generator. Never exceed the maximum power rating of the generator. Power levels between rated and maximum may be used for no more than 30 minutes

NOTICE: *Substantial overloading will open the circuit breaker. Exceeding the time limit for maximum power operation or slightly overloading the generator may not switch the circuit breaker or circuit protector OFF, but will shorten the service life of the generator.*

Limit operation requiring maximum power to 30 minutes. For continuous operation (longer than 30 minutes), do not exceed the rated power. The total power requirements (kW) of all appliances connected must be considered. Appliance and power tool manufacturers usually list rating information near the model number or serial number.

AC Operation

1. Start the engine.

2. Turn the voltage selector switch to either position.

With the voltage selector switch in the ‘‘120/240V’’ position, you can use the 120V and 120/240V receptacles simultaneously. If you are NOT using the 120/240V receptacle, but require more power from the 120V locking plug receptacle, then select the ‘‘120V ONLY’’ position.

3. Switch the AC circuit breaker ON.

4. Plug in the appliance.

Most motorized appliances require more than their rated power for startup.

Do not exceed the current limit specified for any one receptacle. If an overloaded circuit causes the AC circuit breaker or AC circuit protector to switch OFF, reduce the electrical load on the circuit, wait a few minutes and then reset the AC circuit breaker or AC circuit protector.

AC Receptacle Selection

The generator has two separate main power producing circuits. These two circuits supply equal power to different receptacles shown when the voltage selector switch is in the 120/240V position.

When two or more receptacles are used; to prevent overloading, dividing the load between the two power circuits.

Example:

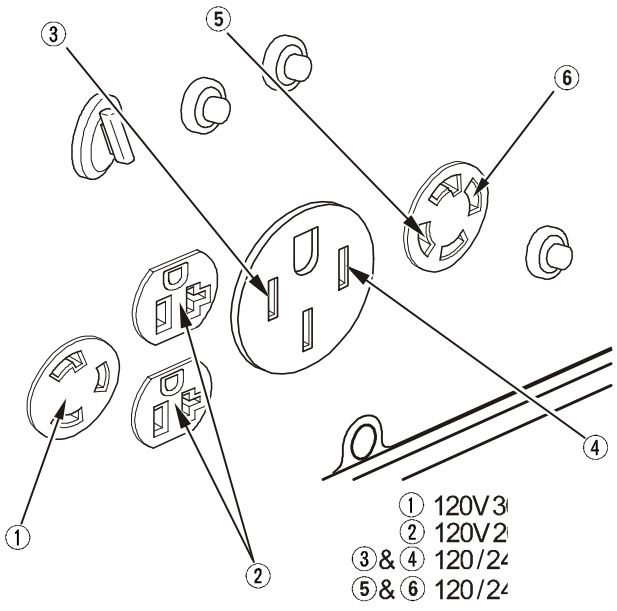
The chart below shows the rated load in amperes that can be connected to each receptacle to balance the generator.

For Example, we have one model of generator whose total rated ampere draws 65 A.

Main power circuit	Receptacles powered by each main circuit	Power distribution
Main Circuit I	2, 4 and 6	2＋4＋6=32.5 A rated.
Main Circuit II	1, 3 and 5	1＋3＋5=32.5 A rated.

The table shows the specifications when the 120/240V locking plug receptacle is used for 120V.

Receptacle 1 has a 20A load connected to it. Receptacle 3 has a 15 A load connected to it. Both receptacles are powered by main power circuit II. The equation tells us that the total power draw on circuit II is 35A. This is a substantial overload of this circuit. To eliminate the excess power draw on circuit II, the load from receptacle 3 should be switched to receptacle 2. Now circuit I is powering the 20A load (less than 32.5A) and circuit II is powering a 15A load (less than 32.5A).



DC Operation

The DC terminals may ONLY be used for charging 12 volt automotive type batteries.

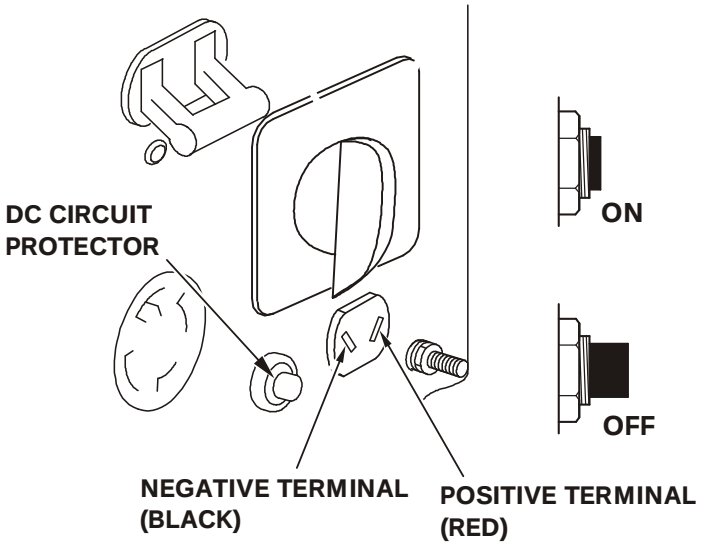
Connecting the battery cables:

1. Before connecting the battery charging cables to a battery that is

installed in a vehicle battery, disconnect the vehicle ground battery cable from the battery negative (−) terminal.

WARNING: The battery gives off explosive gases; keep sparks, flames and cigarettes away. Provide adequate ventilation when charging or using batteries.

Battery posts, terminals and related accessories contain lead and lead compounds. Wash hands after handling.



2. Connect the positive (+) battery cable to the automotive battery positive (+) terminal.

3. Connect the negative (−) battery cable to the automotive battery negative (−) terminal.

4. Make sure circuit breaker is off.

5. Start the generator.

NOTICE: *Do not start the vehicle while the battery charging cable is connected and the generator is running. The vehicle or the generator may be damaged.*

An overloaded DC circuit, excessive current draw by the battery, or a wiring problem will trip the DC circuit protector (PUSH button extends out). If this happens, wait a few minutes before pushing in the circuit protector to resume operation. If the DC circuit protector continues to go OFF, discontinue charging and see your authorized generator dealer.

Disconnecting the battery cables:

1. Stop the engine.

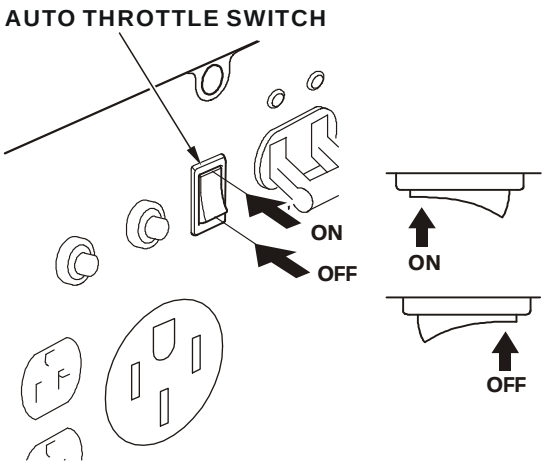
2. Disconnect the negative (−) battery cable from battery.

3. Disconnect the positive (+) battery cable from battery.

Auto Throttle System

With the switch in the ON position, engine speed is automatically reduced when ALL lo
turned OFF or disconnected. When appliances are turned ON or reconnected, the
returns to rated speed. In the OFF position, the auto throttle system does not operate.

Appliances with large start-up power demands may not allow the engine to reach normal operating rpm when they are connected to the generator. Push the auto throttle switch to the OFF position and connect the appliance to the generator. If the engine still will not reach normal operating speed, check that the appliance does not exceed the rated load capacity of the generator.



To avoid extended warm-up periods, keep the switch OFF until the engine reaches operating temperature.

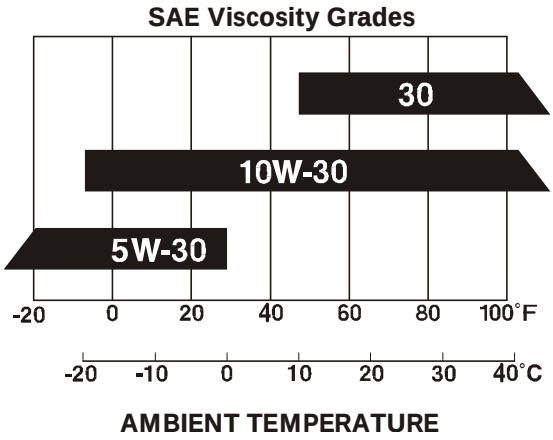
The auto throttle system is not effective for use with appliances that require only momentary power. If the tool or appliance will be turned ON and OFF quickly, the auto throttle switch should be in the OFF position.

PRE-OPERATION CHECK

Engine oil

NOTICE: *Engine oil is major affecting engine performance and service life. Non-detergent and 2-stroke engine oils will damage the engine and are not recommended.*

Check the oil level **BEFORE EACH USE** with the generator on a level surface with the engine stopped.



Use 4-stroke motor oil that meets or exceeds the requirements for API service classification SJ or SG or SF or SN.

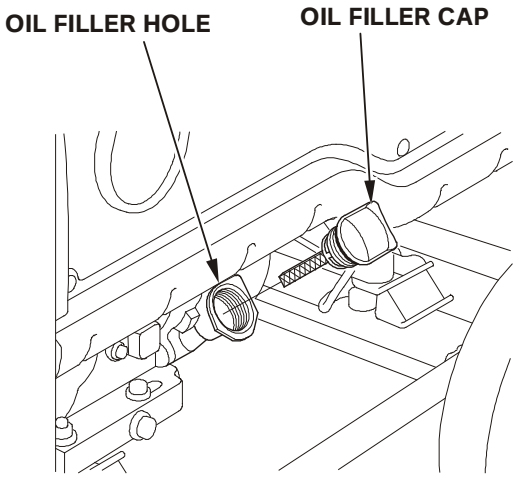
Always check the API SERVICE label on the oil container to be sure it includes the letters SJ for SG or SF or SN.

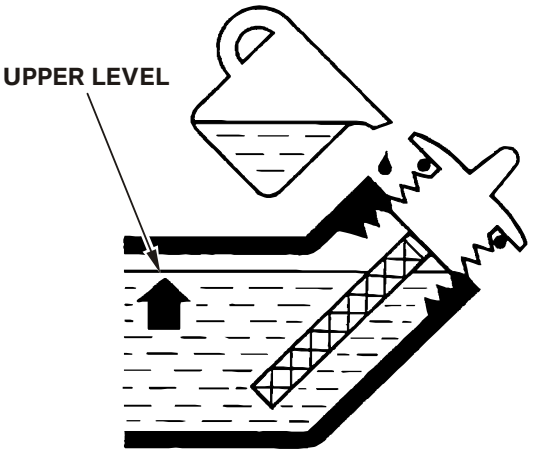
SAE 10W-30 is recommended for general, all-temperature use. Other viscosities shown in the chart may be used when the average temperature in your area is within the indicated range.

1. Remove the oil filler cap and wipe the dipstick clean.

2. Check the oil level by inserting the dipstick into the filler neck without screwing it in.

3. If the oil level is low, fill to the top of the oil filler neck with the recommended oil.





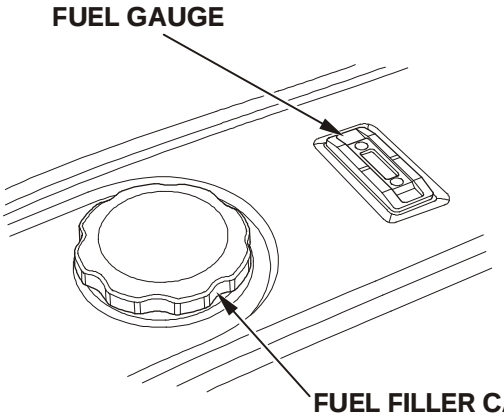
Fill Fuel in tank

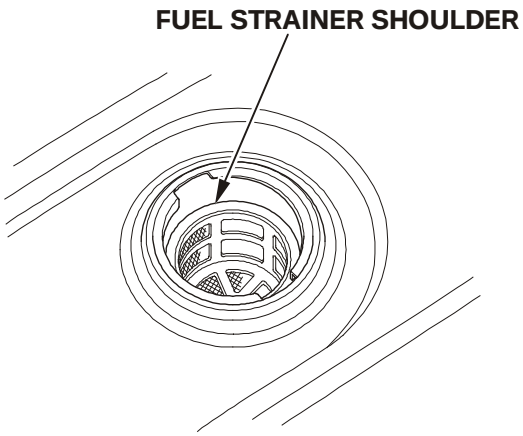
1. Check the fuel level gauge, and refill the tank if the fuel level is low.

2. Refuel carefully to avoid spilling fuel. Do not fill above the shoulder of the fuel strainer.

WARNING: Gasoline is highly flammable and explosive, and you can be burned or seriously injured when refueling, if refueling is not done without caution.

- **Stop engine and keep heat, sparks, and flame away.**
- **Only refuel outdoors.**
- **Wipe up spills immediately.**
- **It is important to use new clean fuel when refueling your unit for optimal performance.**





NOTICE: *Fuel can damage paint and plastic. Be careful not to spill fuel when filling your fuel tank. Damage caused by spilled fuel is not covered under warranty.*

Use gasoline with a pump octane rating of 86 only.

This engine is certified to operate on unleaded gasoline.

Unleaded gasoline produces fewer engine and spark plug deposits and extends e system life.

Never use stale or contaminated gasoline or oil/gasoline mixture. Avoid getting dirt or water in the fuel tank.

Occasionally you may hear a light "knock" or "pinging" (metallic rapping noise) while operating under heavy loads. This is no cause for concern. If knock or pinging occurs at a steady engine speed, under normal load, change to a lower octane rating.

If knock or pinging persists, see an authorized generator dealer.

NOTICE: *Running the engine with persistent spark knock or pinging may cause engine damage. Running the engine with persistent spark knock or pinging is misuse, and the Distributor's Limited Warranty does not cover parts damaged by misuse.*

Oxygenated Fuels

Some conventional gasoline fuels are being blended with alcohol or an ether compound. This gasoline fuel is collectively referred to as oxygenated fuels. To meet clean air standards, some areas of the United States and Canada use oxygenated fuels to help reduce emissions.

If you use an oxygenated fuel, be sure it is unleaded and meets the minimum octane rating requirement.

Before using an oxygenated fuel, try to confirm the fuel's contents.

Some states/provinces require this information to be posted on the pump.

The following are the EPA approved percentages of oxygenates

ETHANOL—(ethyl or grain alcohol) 10% by volume.

You may use gasoline containing up to 10% ethanol by volume. Gasoline containing ethanol may be marketed under the name Gasohol.

MTBE — (methyl tertiary butyl ether) 15% by volume

You may use gasoline containing up to 15% MTBE by volume.

METHANOL — (methyl or wood alcohol) 5% by volume

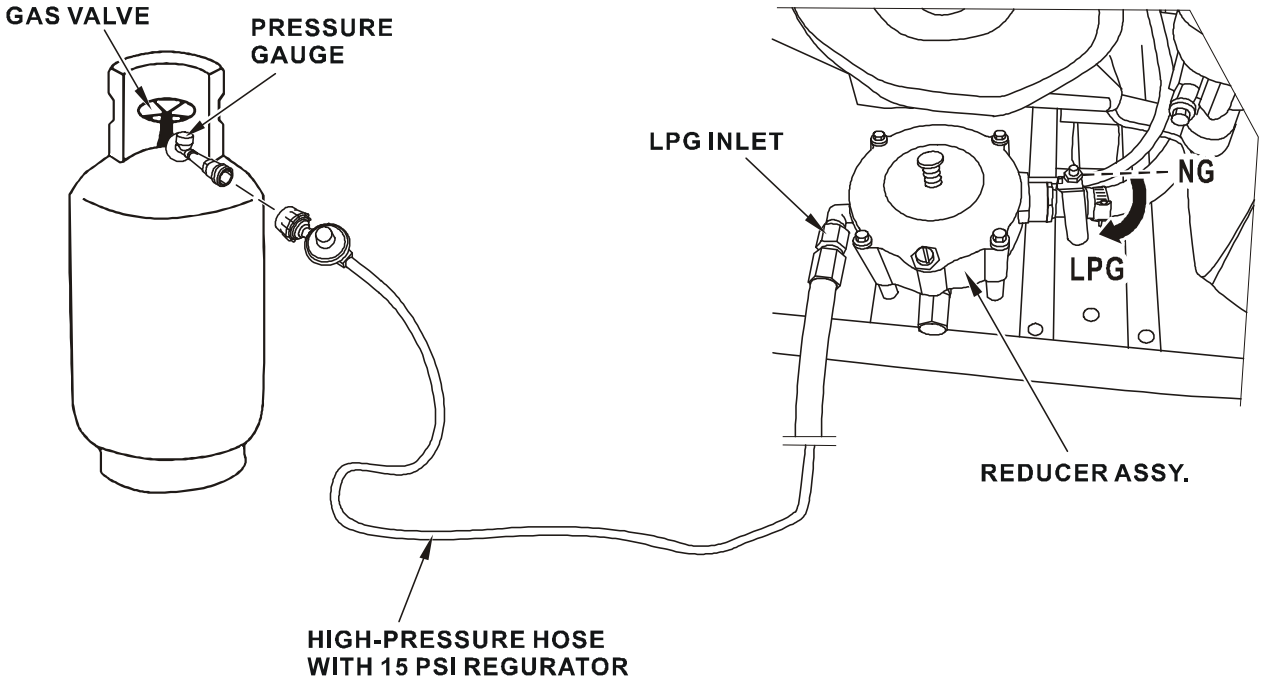
You may use gasoline containing up to 5% methanol by volume as long as it also contains co solvents and corrosion inhibitors to protect the fuel system. Gasoline containing more than 5% methanol by volume may cause starting and/or performance problems. It may also damage metal, rubber, and plastic parts of your fuel system.

If you notice any undesirable operating symptoms, try another service station or switch to another brand of gasoline.

Fuel system damage or performance problems resulting from the use of an oxygenated fuel containing more than the percentages of oxygenated mentioned above are not covered under warranty.

Connect LPG Tank

1. Connect LPG hose on LPG tank and fasten it to LPG inlet.
2. Turn the LPG/NG selector switch to LPG position.



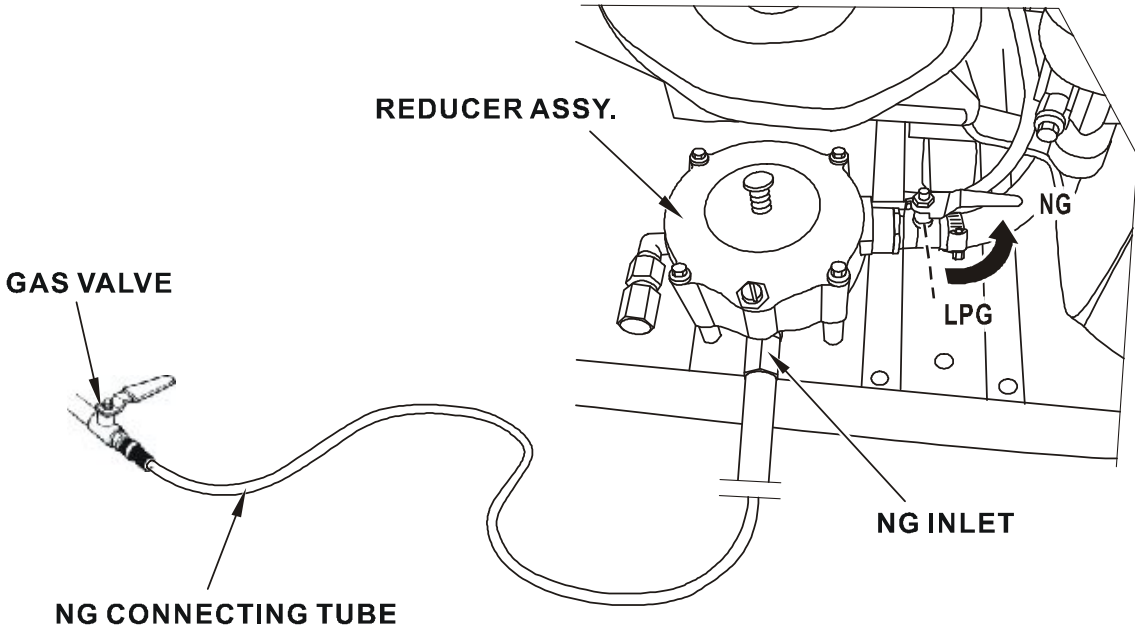
3. Turn the LGP tank valve to "ON" position - full open.
4. Check the LPG to see if it is leaking and then verify that there are no leaks.

CAUTION: Use clean, fresh, regular LPG with LPG gas pressure area as we required

- **DO NOT** mix oil with fuel.
- **DO NOT** use CNG or NG.
- Clean the area around the fuel cap.
- Connect LPG hose on LPG tank and fasten it.
- Turn the LGP tank valve to "ON" position - full open.
- Attach the hose to the LPG fitting on the reducer, and then check for leaks.
- When line starts to freeze or unit starts to run abnormally, replace LPG tank with a full tank.

Connect NG Source

1. Connect NG hose to NG inlet and fasten it.
2. Turn the LPG/NG selector switch to NG position.



3. Turn the NG valve to "ON" position - full open.
4. Check the NG to see if it is leaking and then verify that there are no leaks.

CAUTION: Use clean, fresh, regular NG with NG gas pressure area as we required

- **DO NOT** mix oil with fuel.
- **DO NOT** use LPG, CNG or gasoline as fuel.
- Clean the area around the fuel cap.
- Connect NG tube on NG connecting tube and fasten it.
- Turn the NG connecting tube valve to "ON" position - full open.
- Check the NG to see if it is leaking and then verify that there is no leak.

STARTING THE ENGINE/STOPPING THE ENGINE

Starting the Engine of Gasoline

1. Make sure that the AC circuit breaker is in the OFF position. The generator may be hard to start if a load is connected.
2. Turn gas valve to “OFF” position.
3. Turn the fuel valve lever to the “ON” position.
4. Move the choke lever to the “CLOSE” position.
5. Make sure the auto throttle switch is in the “OFF” position, or more time will be required for the engine to warm up.
6. Turn the engine switch to the ON position.
7. Pull the starter grip lightly until resistance is felt, then pull briskly.

NOTICE: *Do not allow the starter grip to snap back against the engine. Return it gently to prevent damage to the starter or housing.*

With electric starter:

- Connect the ground cables of battery to the generator rear housing.
- Turn the engine switch to the “START” position and hold it there for 5 seconds or until the engine starts.
- When the engine starts, allow the engine switch to return to the ON position.

NOTICE: *Operating the starter motor for more than 5 seconds can damage the motor. If the engine fails to start, release the switch and wait 10 seconds before operating the starter again.*

If the speed of the starter motor drops after a period of time, it is an indication that the battery should be recharged.

8. Move the choke lever to the OPEN position as the engine warms up.
9. If you wish to use the auto throttle system, turn the auto throttle switch to the ON position after the engine has warmed up for 2 or 3 minutes.

NOTICE: *Please don’t start the generator on more than one fuel at the same time. If this happens, shut off all three (3) fuel sources, turn the key to the “OFF” position, and pull the cord 5-10 times. Then restart normally on any one (1) fuel.*

Starting the Engine of LPG/NG

1. Make certain the generator is on a flat, level surface.
2. Disconnect all electrical loads from the generator. Never start or stop the generator with electrical devices plugged in or turned on.
3. Turn fuel valve to “OFF” position.
4. Connect LPG hose to the LPG tank, or Connect NG connecting tube to the NG source, and then open the gas valve slowly, till it totally open (to insure no LPG/NG leakage).
5. Pull the starter cord slowly until resistance is felt and then pull rapidly.
6. If cannot start, push the gas denser device lever lightly, and keep 1-2 seconds, then stop, and then restart the engine.

NOTICE: If the engine starts but does not run, make certain that the generator is on a flat, level surface. The engine is equipped with a low oil sensor that will prevent the engine from running when the oil level falls below a critical threshold.

NOTICE: *If starting multiple times, with electric start or pull cord, and unit does not start, the unit is flooded. Shut off all fuel sources, and turn key to start, activating the electric start for 3-5 seconds. Then restart normally.*

NOTICE: *Please don’t start the generator on more than one fuel at the same time. If this happens, shut off all three (3) fuel sources, turn the key to the “OFF” position, and pull the cord 5-10 times. Then restart normally on any one (1) fuel*.

Gasoline→LPG/NG

1. Turn fuel valve to “OFF” position. The fuel in the float bowel of carburetor allows engine to run until the bowel is drained.
2. When the fuel in the float bowel of carburetor is running low, the engine will start to surge. At the moment, switch on your alternate fuel source. If the unit runs rough, manually accelerate the throttle, and enhance the rotational speed. After all fuel in the generator has burnt out, it should run on your alternative fuel source of LPG or NG.

LPG/NG →Gasoline

1. Switch on your gasoline fuel valve
2. Slowly shut off your LPG or NG supply, the engine will start to surge, at that moment completely switch off your LPG or NG supply. Unit should be running on gasoline.

Stopping the Engine

In an emergency:

To stop the engine in an emergency, move the engine switch to the OFF position.

In normal use:

1. Turn the AC circuit breaker to the “OFF” position. Unplug appliances from the generator AC receptacles. Disconnect DC battery charging cables. Never start or stop the generator with electrical devices plugged in or turned on.
2. Let the generator run at no-load for several minutes to stabilize internal temperatures of the engine and generator.
3. Turn the gas valve or fuel valve to the “OFF” position. Let unit run until it dies on it’s own.
4. Turn the engine switch to the “OFF” position.

NOTICE: If turn off the switch of engine at first, the gas will continue to enter into the cylinder of engine during the engine stopping time. Such condition will cause intense burning or more gas so that it influence the restart.

MAINTENANCE

The Importance of Maintenance

Good maintenance is essential for safe, economical, and trouble-free operation. It will also help reduce air pollution.

WARNING: Improper maintenance, or failure to correct a problem, can cause a malfunction in which you can be seriously injured or killed. Always follow the inspection and maintenance recommendations and schedules in this owner's manual.

To help you properly care for your generator, the following pages include a maintenance schedule, routine inspection procedures, and simple maintenance procedures, using basic hand tools. Other service tasks that are more difficult, or require special tools, are best handled by professionals and are normally performed by a qualified mechanic.

The maintenance schedule applies to normal operating conditions. If you operate your generator under severe conditions, such as sustained high-load or high-temperature operation, or use in unusually wet or dusty conditions, consult your servicing dealer for recommendations applicable to your individual needs and use.

Maintenance, replacement, or repairs of the emission control devices and systems may be performed by any engine repair establishment or individual, using parts tl "certified" to EPA standards.

Maintenance Safety

Some of the most important safety precautions are stated below, however, we cannot warn you of every conceivable hazard that can arise in performing maintenance. Only you can decide whether or not you should perform a given task.

Failure to properly follow maintenance instructions and precautions can lead to serious injury or death.

Always follow the procedures and precautions in the owner's manual.

Safety precautions.

Make sure the engine is off before you begin any maintenance or repairs. This will eliminate several potential hazards:

- **Carbon monoxide poisoning from engine exhaust.**

  •Be sure there is adequate ventilation whenever you operate the engine.

- **Burns from hot parts**.

  - Let the engine and exhaust system cool before touching. To avoid burn injuries.

- **Injury from moving parts.**

  - Do not run the engine unless instructed to do so.
  - Read the instructions before you begin, and make sure you have the tools and skills required.
  - To reduce the possibility of fire or explosion, be careful when working around gasoline. Use only a nonflammable solvent, not gasoline, to clean parts. Keep cigarettes, sparks, and flames away from all fuel-related parts.

Remember that your servicing dealer knows your generator best and is fully equipped to maintain and repair it.

To ensure the best quality and reliability, use only new, genuine parts for repair or replacement.

Emission Control System Information

Source of Emissions

The combustion process produces carbon monoxide, oxides of nitrogen, and hydrocarbons. Control of hydrocarbons and oxides of nitrogen is very important because, under certain conditions, they react to form photochemical smog when subjected to sunlight. Carbon monoxide does not react in the same way, but it is toxic.

Our Utilizes lean carburetor settings and other systems to reduce the emissions of monoxide, oxides of nitrogen, and hydrocarbons.

The U.S. and California Clean Air Acts

EPA and California regulations require all manufacturers to furnish written instructions describing the operation and maintenance of emission control systems.

The following instructions and procedures must be followed in order to keep the emissions from your engine within the emission standards.

Tampering and Altering

Tampering with or altering the emission control system may increase emissions beyond the legal limit. Among those acts that constitute tampering are:

- Removal or alteration of any part of the intake, fuel, or exhaust systems.
- Altering or defeating the governor linkage or speed-adjusting mechanism to cause the engine to operate outside its design parameters.

Problems That May Affect Emissions

If you are aware of any of the following symptoms, have your engine inspected and repaired by your servicing dealer.

- Hard starting or stalling after starting.
- Rough idle.
- Misfiring or backfiring under load.
- Afterburning (backfiring).
- Black exhaust smoke or high fuel consumption.

Replacement Parts

The emission control systems on your engine were designed, built, and certified to conform to EPA and California emission regulations. We recommend the use of genuine parts whenever you have maintenance done. These original-design replacement parts are manufactured to the same standards as the original parts, so you can be confident of their performance. The use of replacement parts that are not of the original design and quality may impair the effectiveness of your emission control system.

A manufacturer of an aftermarket part assumes the responsibility that the part will not adversely affect emission performance. The manufacturer or rebuild of the part must certify that use of the part will not result in a failure of the engine to comply with emission regulations.

Maintenance

Follow the maintenance schedule on page 22. Remember that this schedule is based on the assumption that your machine will be used for its designed purpose. **Sustained high-load or high-temperature operation, or use in unusually wet or dusty conditions, will more frequent service.**

Air Index

An Air Index Information hang tag/label is applied to engines certified to an emission durability time period in accordance with the requirements of the California Air Resources Board.

The bar graph is intended to provide you, our customer; the ability to compare the emissions performance of available engines. The lower the Air Index, the less pollution.

The durability description is intended to provide you with information relating to the engine's emission durability period. The descriptive term indicates the useful-life period for the engine's emission control system. See your *Emission Control Warranty* for additional information.

Descriptive Term	Applicable to Emission Durability Period
Moderate	50 hours (0-65 cc) 125 hours (greater than 65 cc)
Intermediate	125 hours (0-65 cc) 250 hours (greater than 65 cc)
Extended	300 hours (0-65 cc) 500 hours (greater than 65 cc)

The Air Index Information hang tag must remain on the generator until it is sold. Remove the hang tag before operating the generator.

Maintenance Schedule

REGULAR SERVICE PERIOD (3) ITEM Perform at every indicated month or operating hour interval, whichever comes first			Before each use	First month or 12 Hrs	Every 3 month or 50 Hrs	Every 6 month or 100 Hrs	Every year or 300 Hrs
●	Engine oil	Check level	O				
		Change		O		O	
●	Air filter	Check	O				
		Clean			O(1)		
●	Sediment cup	Clean				O	
●	Spark plug	Check-adjust				O	
		Replace					O
●	Idle speed	Check-adjust					O(2)
●	Valve clearance	Check-adjust					O(2)
●	Combustion chamber	Clean	After every 500 Hrs(2)				
●	Fuel tank	Clean	Every years (2)				
●	Fuel filter	Check				O	
		Replace					O(2)
●	Fuel tube	Check	Every 2 years (Replace if necessary) (2)				
●	LPG hose						

NOTICE: *Emission related items.*

(1) Service more frequently when used in dusty areas.

(2) These items should be serviced by your servicing dealer, unless the owner has the proper tools and is mechanically proficient.

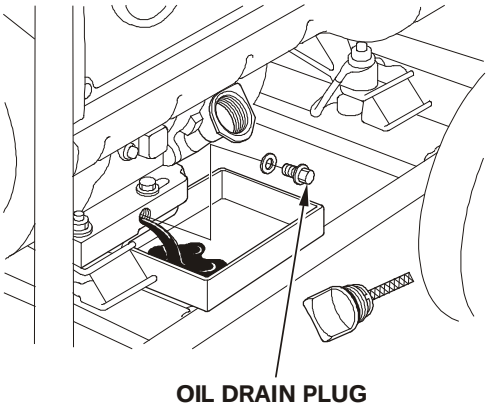
Engine Oil Change

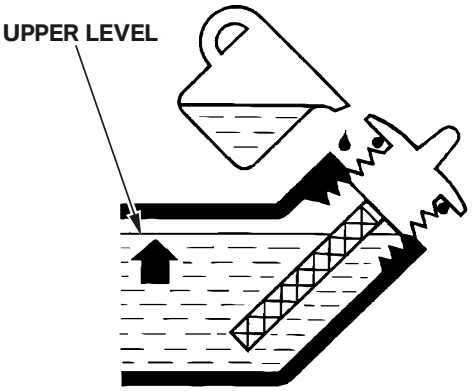
Drain the oil while the engine is warm to assure complete and rapid draining.

1. Remove the drain plug and sealing washer, remove the oil filler cap, and drain the oil.

2. Install the drain plug and sealing washer. Tighten the plug securely.

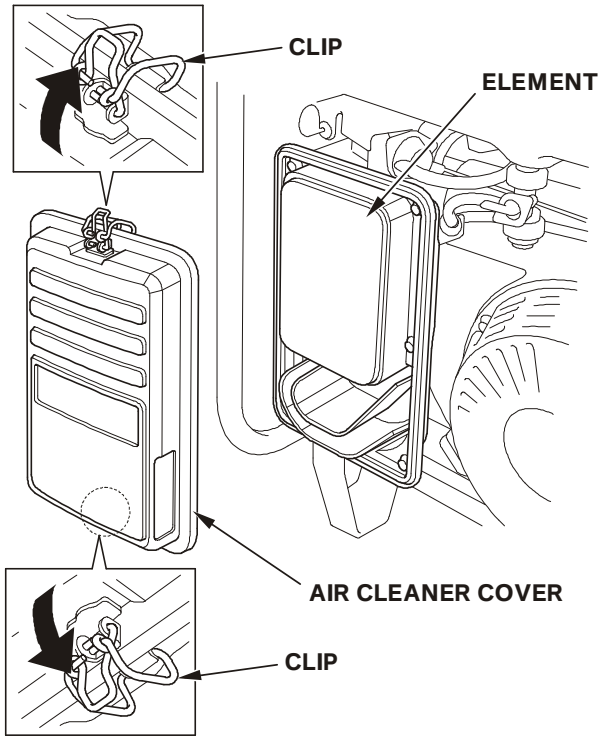
3 Refill with the recommended oil and check the level.

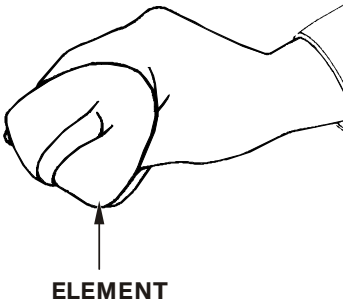




Wash your hands with soap and water after handling used oil.

Please dispose of used motor oil in a manner that is compatible with the environment. We suggest you take it in a sealed container to your local service station or recycling center for reclamation. Do not throw it in the trash or pour it on the ground, or down a drain.





Air Cleaner Service

A dirty air cleaner will restrict air flow to the carburetor. To prevent carburetor malfunction, service the air cleaner regularly. Service more frequently when operating the generator in extremely dusty areas.

NOTICE: *Never run the generator without the air cleaner. Rapid engine wear will result:*

1. Unsnap the air cleaner cover clips, remove the air cleaner cover, and remove the element.

2. Wash the element in a solution of household detergent and warm water, then rinse thoroughly, or wash in nonflammable or high flash point solvent. Allow the element to dry thoroughly, before reinstalling.

3. Soak the element in clean engine oil and squeeze out the excess oil. The engine will smoke during initial start-up if too much oil is left in the element.

4. Reinstall the air cleaner element wand the cover.

Fuel Sediment Cup Cleaning

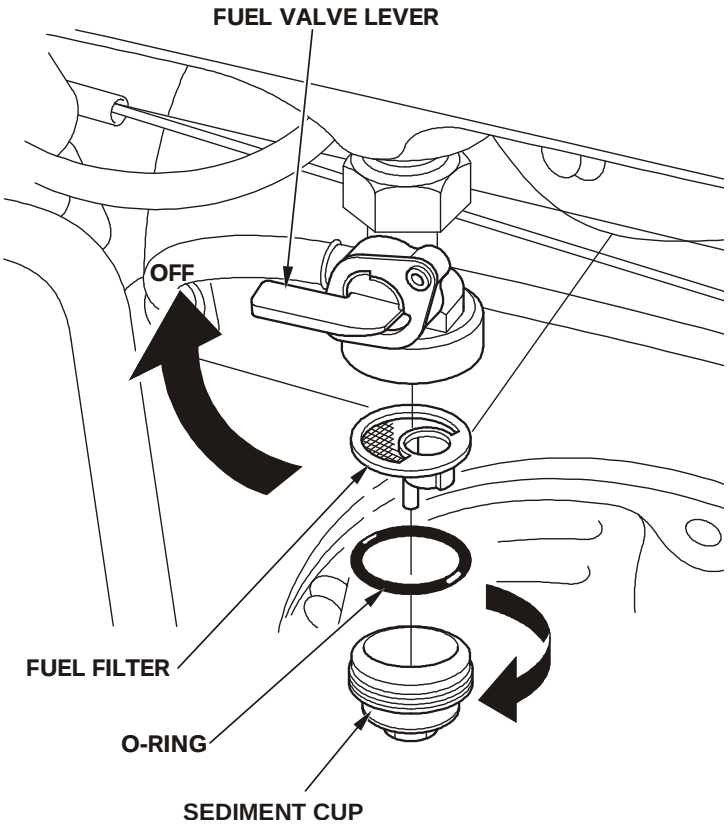
The sediment cup prevents dirt or water which may be in the fuel tank from entering the carburetor. If the engine has not been run for a long time, the sediment cup should be cleaned.

1. Turn the fuel valve lever to the “OFF” position. Remove the sediment Cup, O-ring, and filter.

2. Clean the sediment cup, O-ring, and filter in nonflammable or high flashpoint solvent.

3. Reinstall the filter, O-ring, and sediment cup.

4. Turn the fuel valve lever “ON” and check for leaks.



Spark Plug Service

In order to service the spark plug, you will need a spark plug wrench (commercially available).

Recommended spark plugs: BPR5ES (NGK), W16EPR-U (DENSO), F7RTC

To ensure proper engine operation, the spark plug must be properly gapped and free of deposits.

If the engine has been running, the muffler will be very hot. Be careful not to touch the muffler. Allow muffler to cool down prior to coming into contact with muffler.

1. Remove the spark plug cap.

2. Clean any dirt from around the spark plug base.

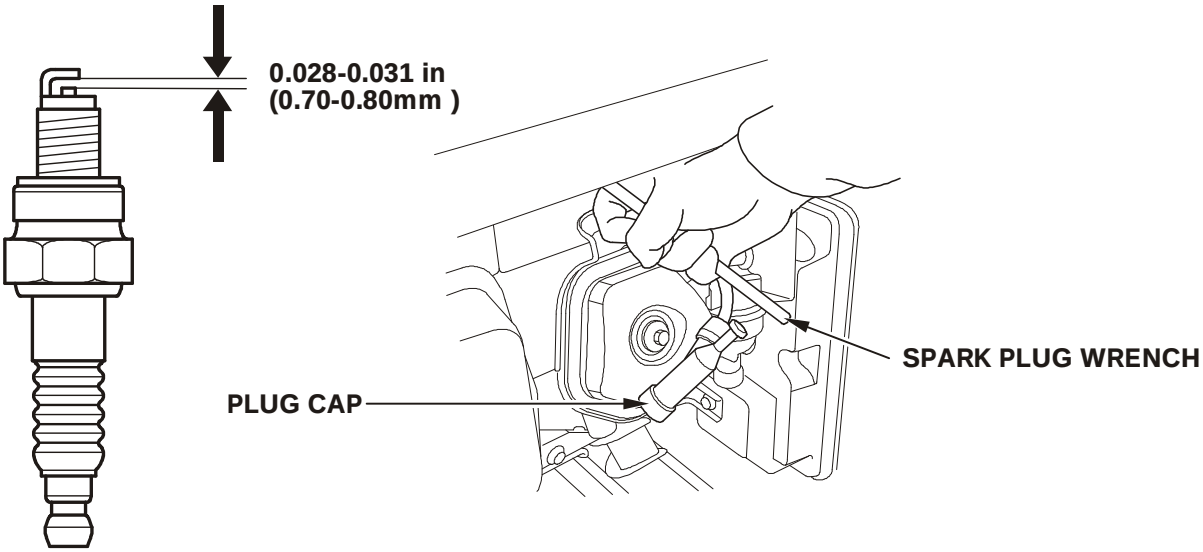
3. Use a spark plug wrench to remove the spark plug.

4. Visually inspect the spark plug. Discard it if the insulator is cracked or chipped. Cl
spark plug with a wire brush if it is to be reused.

5. Measure the plug gap with a feeler gauge.

Correct as necessary by carefully bending the side electrode.

The gap should be: 0.028-0.031 in (0.70--0.80 mm)



7. Check that the spark plug washer is in good condition, and thread the sparkplug in by hand to prevent cross-threading.

8. After the spark plug is seated, tighten with a spark plug wrench to compress the washer.

— If installing a new spark plug, tighten 1/2 turn after the spark plug seats to compress the washer. If reinstalling a used spark plug, tighten 1/8-1/4 turn after the spark plug seats to compress the washer.

NOTICE: *The Spark plug must be securely tightened. An improperly tightened Spark plug can become very hot and could damage the engine. Never use spark plugs which have an improper heat range. Use only the recommended Spark plugs or equivalent.*

TRANSPORTING STORAGE

When transporting the generator, turn the engine switch and the fuel valve OFF and keep the generator level to prevent fuel spillage. Fuel vapor or spilled fuel may ignite.

WARNING: Contact with a hot engine or exhaust system can cause serious burns or fires. Let the engine cool before transporting or storing the generator.

Take care not to drop or strike the generator when transporting. Do not place heavy objects on the generator.

Before storing the unit for an extended period:

1. Be sure the storage area is free of excessive humidity and dust.

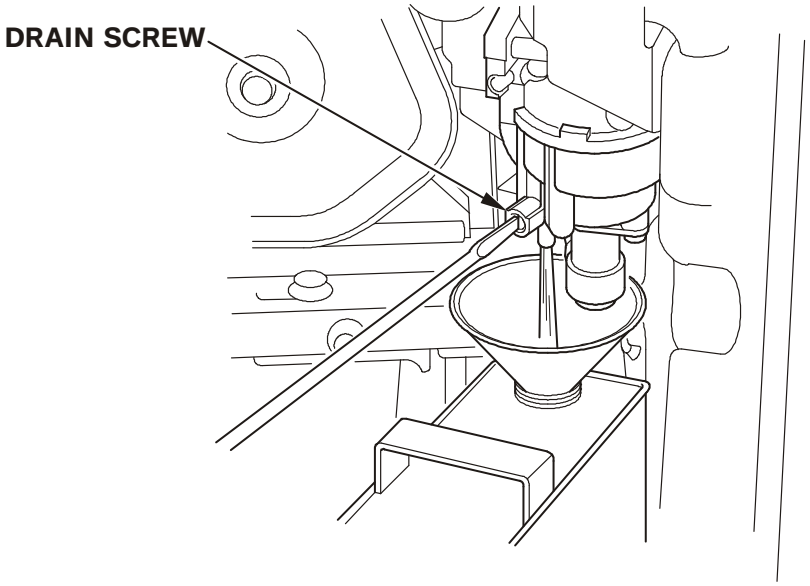
2. Service according to the table below:

STORAGE TIME	**RECOMMENDED SERVICE PROCEDURE TO PREVENT HARD STARTING**
Less than 1 month	No preparation required
1 to 2 months	Fill with fresh gasoline and add gasoline stabilizer*.
2 months to 1 year	Fill with fresh gasoline and add gasoline stabilizer*. Drain the carburetor float bowl. Drain the fuel sediment cup.
1 year or more	Fill with fresh gasoline and add gasoline stabilizer*. Drain the carburetor float bowl. Drain the fuel sediment cup. Remove the spark plug. Put a tablespoon of engine oil into the cylinder. Turn the engine slowly with the pull rope to distribute the oil. Reinstall the spark plug. Change the engine oil. After removal from storage, drain the stored gasoline into a suitable container, and fill with fresh gasoline before starting.
* Use gasoline stabilizer that are formulated to extend storage life.	

Storage Procedure

1. Drain the carburetor by loosening the drain screw. Drain the gasoline into a suitable container.

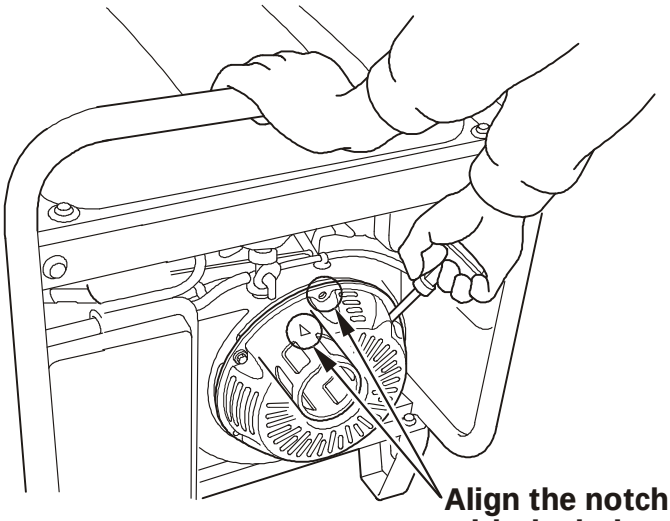
WARNING: Gasoline is extremely flammable and is explosive under certain conditions. Perform this task in a well ventilated area with the engine stopped. Do not smoke or allow flames or sparks in the area during this procedure.



2. Change the engine oil.

3. Remove the spark plug, and pour about a tablespoon of clean engine oil into the cylinder. Crank the engine several revolutions to distribute the oil, then reinstall the spark plug.

4. Slowly pull the starter grip until resistance is felt. At this point, the piston is coming up on its compression stroke and both the intake and exhaust valves are closed. Storing the engine in this position will help to protect it from internal corrosion.



Align the notch on the starter pulley with the hole at the top of recoil starter.

ASSEMBLY

The Importance of Proper Assembly

Proper assembly is essential to operator safety and the reliability of the machine. Any error or oversight made by the person assembling and servicing a unit can easily result in faulty operation, damage to the machine, or injury to the operator.

WARNING: Improper assembly can cause an unsafe condition that can lead to serious injury or death. Follow the procedures and precautions in the assembly instructions carefully.

Some of the most important safety precautions are given below. However, we cannot warn you of every conceivable hazard that can arise in performing this assembly. Only you can decide whether or not you should perform a given task.

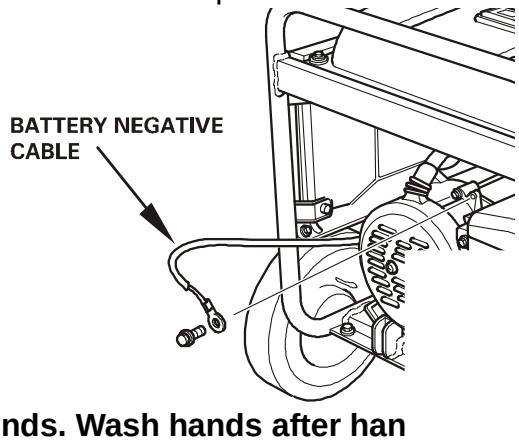
WARNING: Failure to properly follow instructions and precautions can cause you to be seriously hurt or killed. Follow the procedures and precautions in this manual carefully.

Important Safety Precautions

- Make sure you have a clear understanding of all basic shop safety practices and that you are wearing appropriate clothing and safety equipment. When performing this assembly, be especially careful of the following:
- ☐ Read the instructions before you begin and be sure you have the tools and skills required to perform the tasks safely.
- Make sure the engine is off before you begin any maintenance or repairs. This will help eliminate several potential hazards:
- ☐ **Carbon monoxide poisoning from engine exhaust.**
  Be sure there is adequate ventilation whenever you run the engine.
- ☐ **Burns from hot parts.**
  Let the engine and exhaust system cool before touching.
- ☐ **Injury from moving parts.**
  Do not run the engine unless the instruction tells you to do so. Even then, keep your hands, fingers, and clothing away. Do not run the engine when any protective guard or shield is removed.
- To reduce the possibility of a fire or explosion, be careful when working around gasoline or batteries. Use only a nonflammable solvent, not gasoline, to clean parts. Keep all cigarettes, sparks, and flames away from all fuel-related parts.

Battery Negative Cables Connection

1. Route the battery negative cable under the tank.
2. Connect the battery negative cable from the battery negative (−) terminal to the generator rear housing. When disconnecting, disconnect at the generator rear housing first.

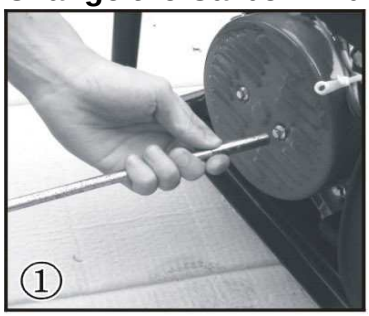


WARNING: Battery posts, terminals and related accessories contain lead and lead compounds. Wash hands after han

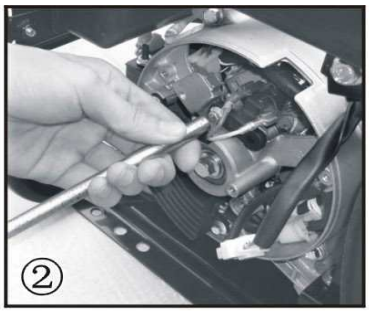
TROUBLESHOOTING

Problem	Cause	Solution
Engine will not start	Engine switch is set to “off”.	Set engine switch to “on”.
	Fuel valve is turned to “closed”.	Turn fuel valve to “open” position.
	Choke is open.	Close the choke
	Engine is out of gas.	Add gas.
	Engine is filled with contaminated or old gas	Change the gas on the engine.
	Spark plug is dirty.	Clean spark plug.
	Spark plug is broken.	Replace spark plug.
	Generator is not on level surface.	Move generator to a level surface to prevent low oil shutdown from triggering.
	Oil is low	Add or replace oil.
Engine runs but there is no electrical output	Circuit breaker is off.	Set the circuit breaker to the “on” position.
	Bad connecting wires/cables.	If you are using an extension cord, try a different one.
	Bad electrical device connected to generator.	Try connecting a different device.
Generator runs but does not support all electrical devices connected.	Generator is overloaded	Try connecting fewer electrical loads to the generator.
	Out of gas	Fill gas tank
	Short in one of the connected devices.	Try disconnecting any faulty or short-circuited electrical loads.
	Air cleaner is dirty.	Clean or replace air cleaner.

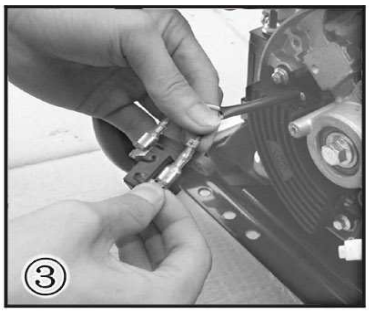
Change the Carbon-Brush



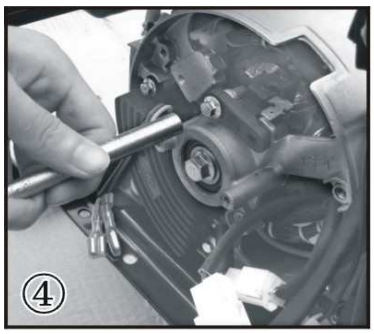
Dismantle the 2 bolts (M5X12) of electric machine back-cover.



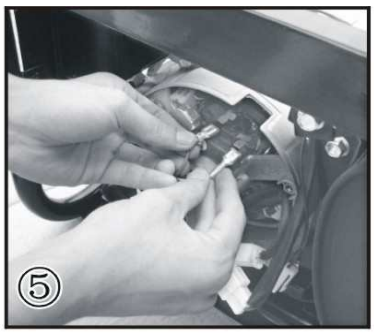
Take down the installed bolts (M5X16) of carbon-brush.



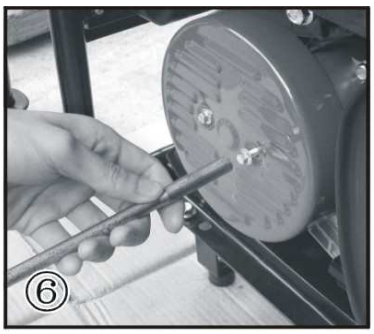
Take down the carbon-brush from DC wire of excitation.



Install the new carbon-brush with bolts (M5X16).

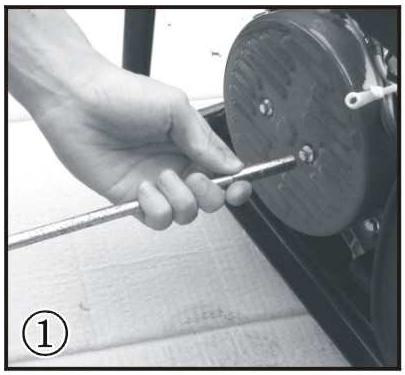


Insert and connect the DC wire of excitation according to anode-cathode.

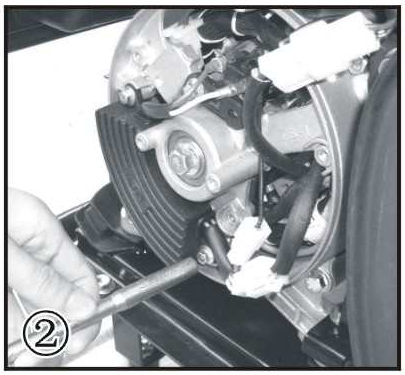


Install the electric machine back -cover with 2bolts (M5X12).

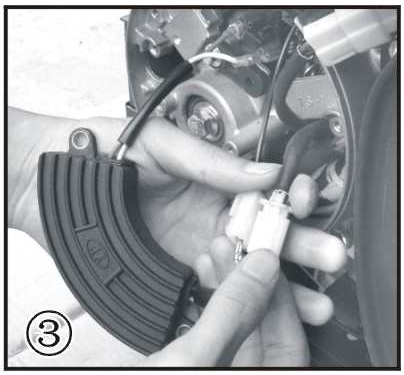
Change the AVR



Dismantle the 2 bolts (M5X12) of electric machine back-cover.

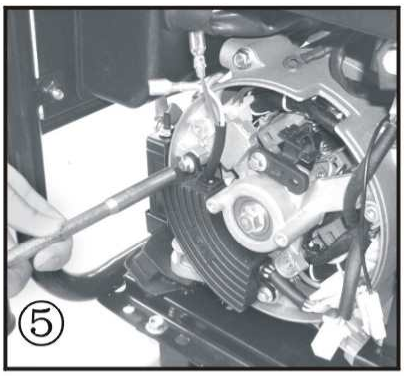


Take down the 2 installed bolts (M5X16) of AVR.

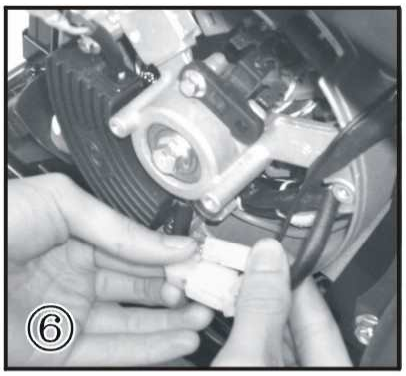


Disconnect the sample wire hindered.

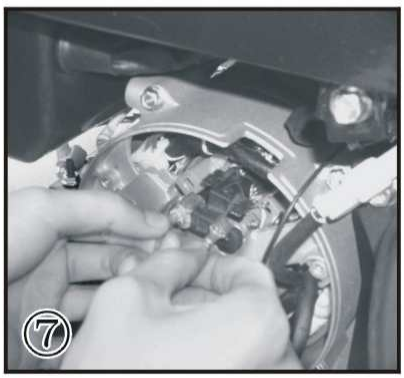
Take down the AVR from carbon-brush



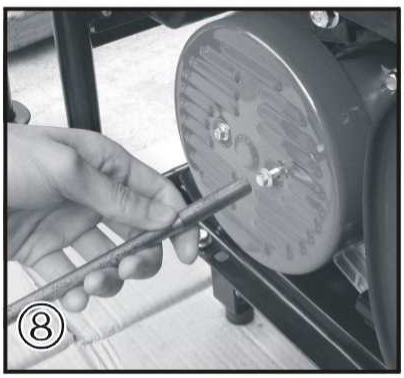
Install the new AVR with 2 bolts (M5X16)



Connect the sample wire hindered.



Insert and connect the DC wire of excitation according to anode-cathode.



Install the electric machine back-cover with 2 bolts (M5 X12)

Grounding Requirements for Power Land Portable Generators

Portable generators are internal combustion engines used to generate electricity. They are useful when temporary or remote power is needed, and are commonly used during cleanup and recovery efforts following disasters.

Major Causes of Injuries and Fatalities

- Shocks and electrocution to users from improper use.
- Shocks and electrocution to utility workers from improper connection to structures, such as residences, offices, shops and trailers.

Safe Work Practices

- Maintain and operate portable generators in accordance with the manufacturer's use and safety instructions.
- Never attach a portable generator directly to the electrical system of a structure (home, office or trailer) unless the generator has a properly installed open-transition transfer switch.
- Always plug electrical appliances and tools directly into the generator, using the appliance manufacturer's supplied cords. Use heavy-duty extension cords that contain a grounding conductor (3-wire flexible cord and 3-pronged cord connectors).
- Proper grounding and bonding are a means to prevent shocks and electrocutions.
- Use ground-fault circuit interrupters (GFCIs) as per the manufacturer's instructions.
- Do not connect a generator to a structure unless the generator has a properly installed transfer switch.
- Visually inspect the equipment before use; remove defective equipment from service; replace defective equipment be for use.

Grounding Requirements for Portable and Vehicle-mounted Generators

Under the following conditions, that the frame of a portable generator need not be grounded (connected to earth) and that the frame may serve as the ground (in place of the earth): unless the unit is bonded. If your generator has a bonded neutral and ground you MUST ground the generator to (earth ground with a copper ground rod)

Below you will find 1 illustration of a generator ground rod system.

- The generator supplies only equipment mounted on the generator and/or cord-and plug-connected equipment through receptacles mounted on the generator,
- The noncurrent-carrying metal parts of equipment (such as the fuel tank, the internal combustion engine, and the generator's housing) are bonded to the generator frame, and the equipment grounding conductor terminals (of the power receptacles that are a part of [mounted on] the generator) are bonded to the generator frame, Thus, rath connect to a grounding electrode system, such as a driven ground rod, the gene frame replaces the grounding electrode.

Below you will find 1 illustration of a generator ground rod system.

- The generator supplies only equipment mounted on the generator and/or cord-and plug-connected equipment through receptacles mounted on the generator,
- The noncurrent-carrying metal parts of equipment (such as the fuel tank, the internal combustion engine, and the generator's housing) are bonded to the generator frame, and the equipment grounding conductor terminals (of the power receptacles that are a part of [mounted on] the generator) are bonded to the generator frame, Thus, rather than connect to a grounding electrode system, such as a driven ground rod, the generator's frame replaces the grounding electrode.

If these conditions do not exist, then a grounding electrode, such as a ground rod, is required.

If the portable generator is providing electric power to a structure by connection via a transfer switch to a structure (home, office, shop, trailer, or similar) it must be connected to a grounding electrode system, such as a driven ground rod. The transfer switch must be approved for the use and installed in accordance with the manufacturer's installation instructions by a qualified electrician.

Grounding requirements for generators connected via transfer switches are covered by Article 250 of the National Electrical Code (NEC).

Safe Work Practices for Portable Tools include:

- Do not use underrated cords—replace them with appropriately rated cords that use heavier gauge wires.
- Never use electrical tools or appliances with frayed cords, missing grounding prongs, or damaged or cracked housings.
- Use double-insulated tools and equipment distinctively marked as such, where possible.

Verification by Testing

The integrity of the connection between the generator's frame and the equipment grounding terminals of power receptacles is important to the safe use of the equipment. The connection may be confirmed via testing by a competent electrician with the correct equipment. The ohmic resistance should measure near zero and must not be intermittent, which indicates a loose connection.

Bonding Versus Grounding

Bonding and grounding are separate requirements for generators and other electrical distribution systems. Grounding means the connection, or the establishment of a connection, of an electric circuit or equipment to reference ground, which includes the generator's frame. Bonding is the intentional connection between the grounded circuit conductor (neutral) and the grounding means for the generator, which includes the generator's frame. Thus, e
bonding of the neutral conductor to the generator's frame is also a concern for the safe
the equipment. As with grounding terminal connections, proper bonding of the neutral t
of a power receptacle may be confirmed via testing by a competent electrician with the

equipment, and the ohmic resistance should measure near zero and must not be intermittent, which indicates a loose connection.

How to ground Powerland generator:

1.Tools you will need: Sledgehammer, cooper wire (Show in picture 1)

picture 1

2.Wire the cooper line onto the knob on the panel as shown in picture 2

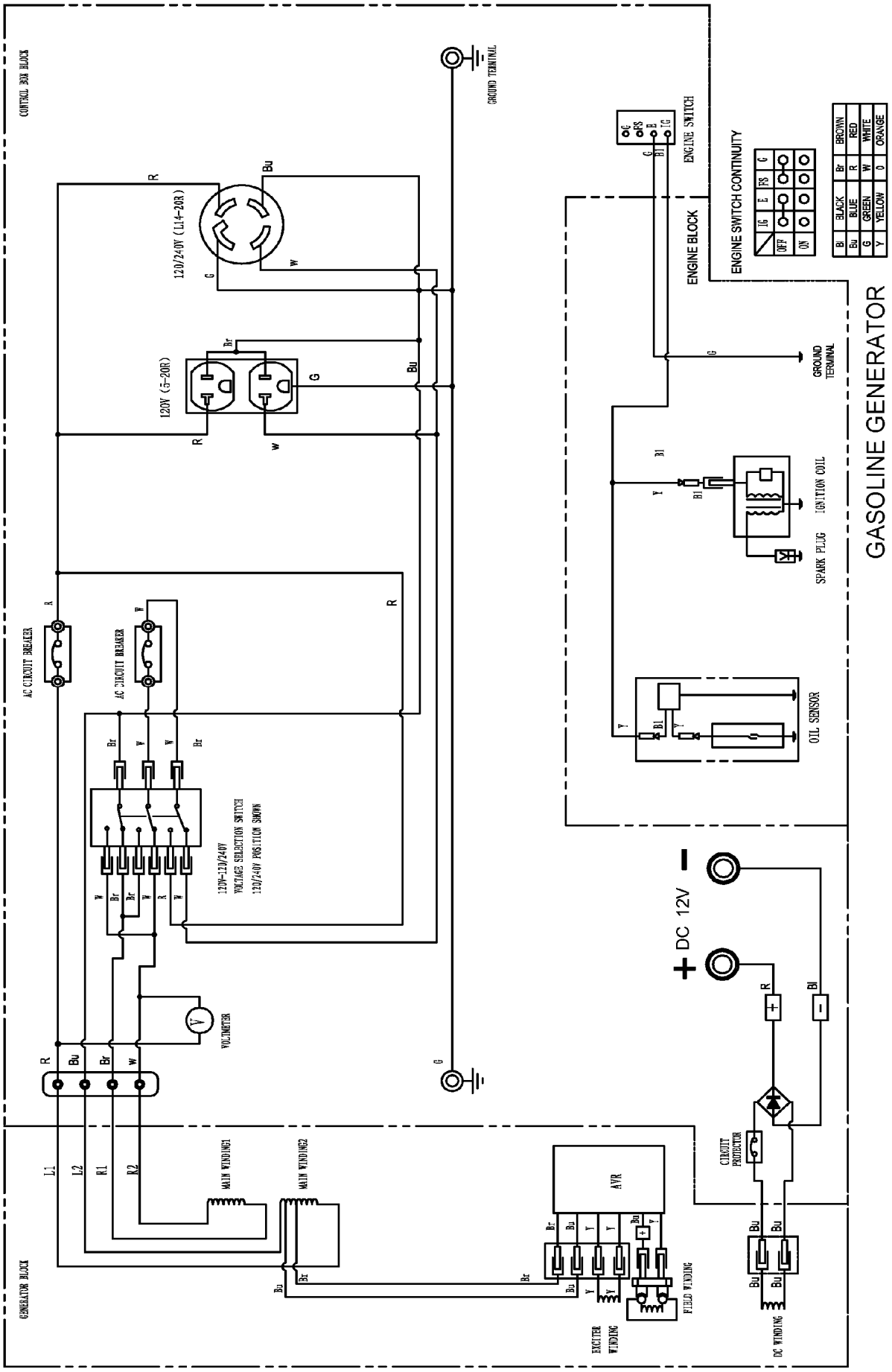
3.Wire the cooper line into the ground with the cooper pole embedded into the earth ground shown in picture 3

picture 2

picture 3

WIRING DIAGRAM

PD3G4400E



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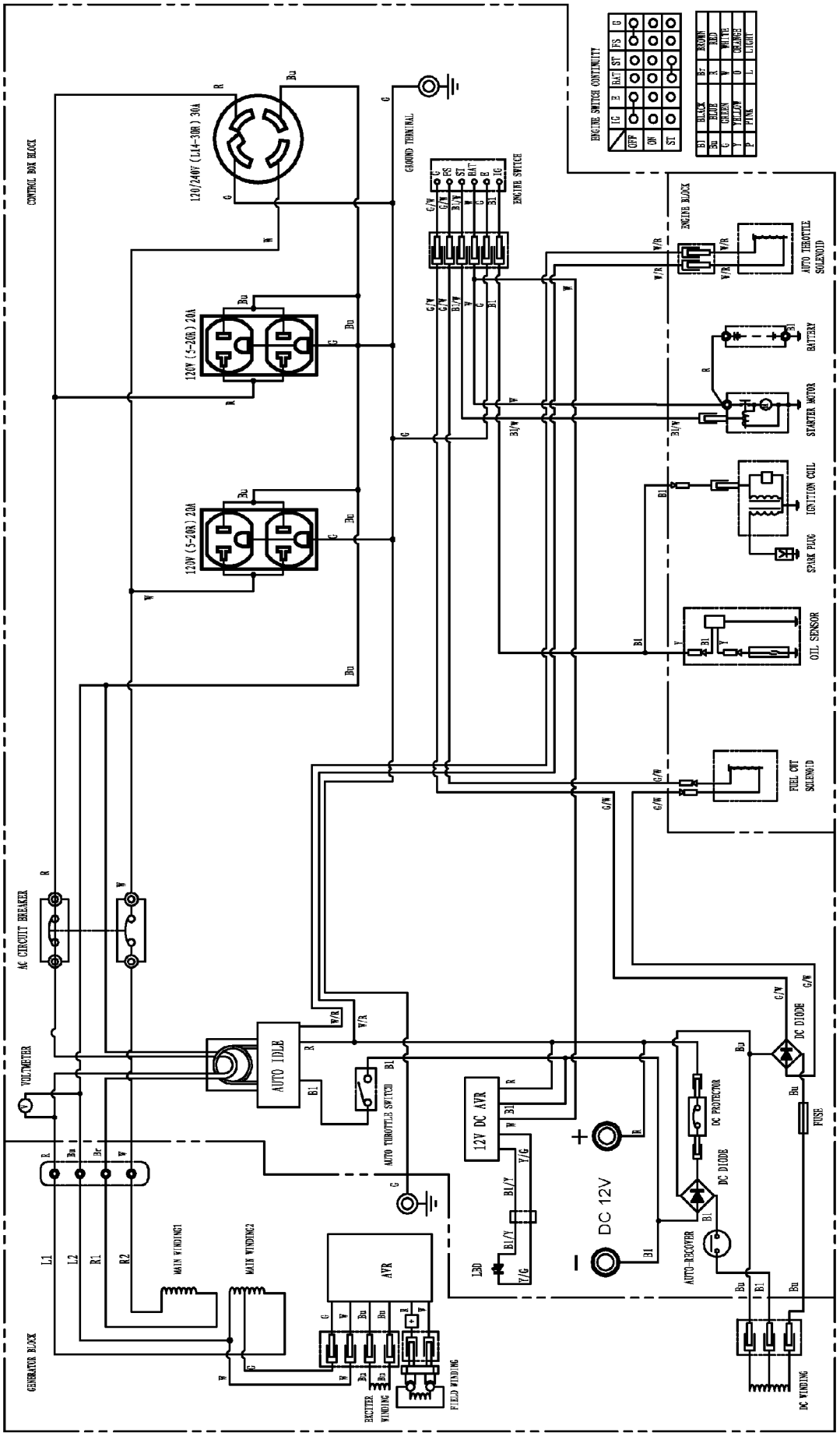
CONTROL BOX BLOCK
120/240V (L14-30R) 30A
120V (5-20R) 20A
120V (5-20R) 20A
GROUND TERMINAL
ENGINE SWITCH
ENGINE BLOCK
AUTO THROTTLE SOLENOID
BATTERY
STARTER MOTOR
IGNITION COIL
SPARK PLUG
OIL SENSOR
FUEL CUT SOLENOID
ENGINE SWITCH CONTINUITY
OFF
ON
ST
BLACK
BLUE
GREEN
YELLOW
PINK
BROWN
RED
WHITE
ORANGE
LIGHT
AC CIRCUIT BREAKER
VOLTMETER
AUTO IDLE
AUTO THROTTLE SWITCH
12V DC AVR
DC DIODE
FUSE
DC PROTECTOR
DC DIODE
AUTO-RECOVER
DC 12V
LED
GENERATOR BLOCK
L1
L2
R1
R2
MAIN WINDING1
MAIN WINDING2
AVR
EXCITER WINDING
FIELD WINDING
DC WINDING

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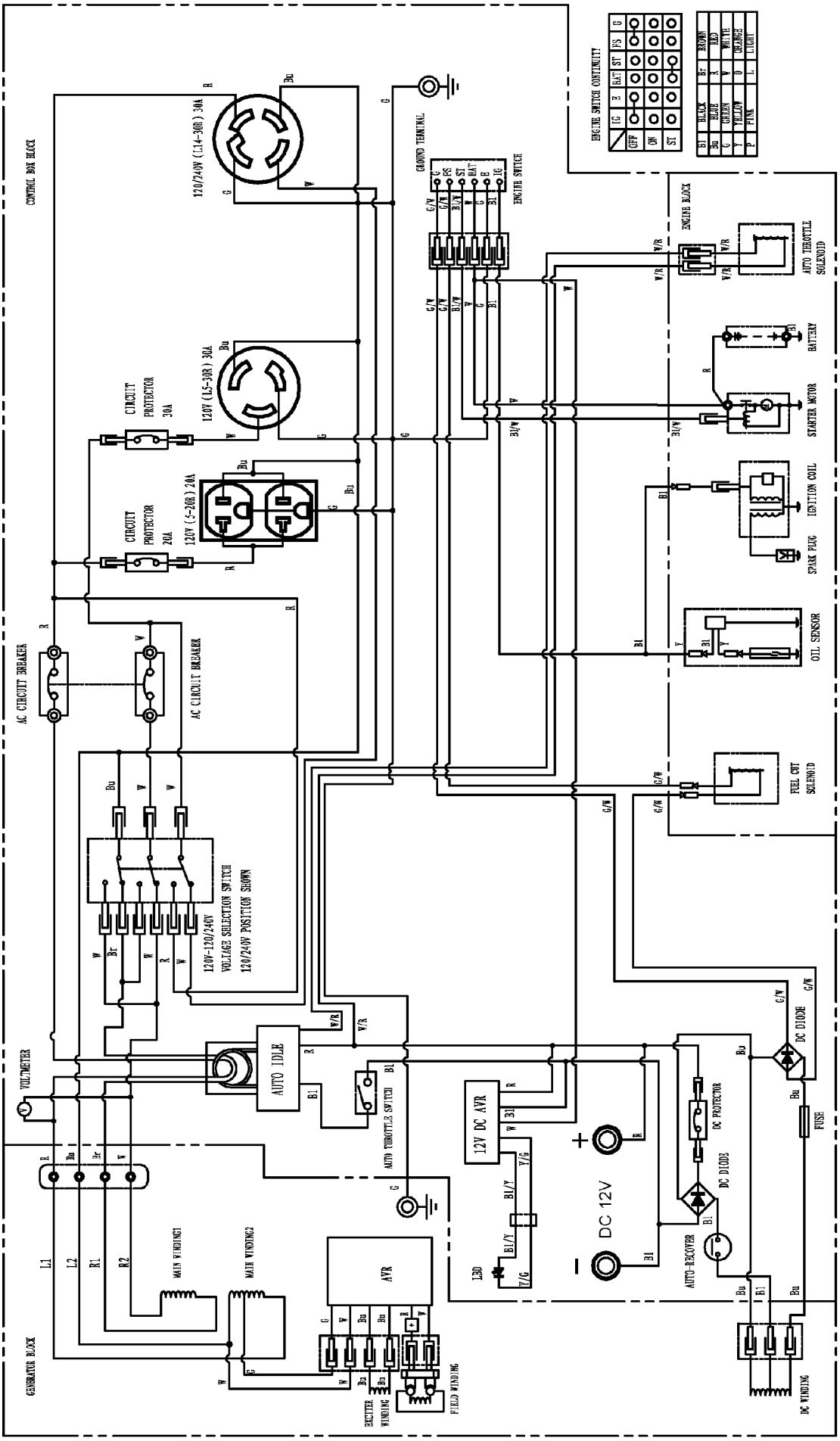
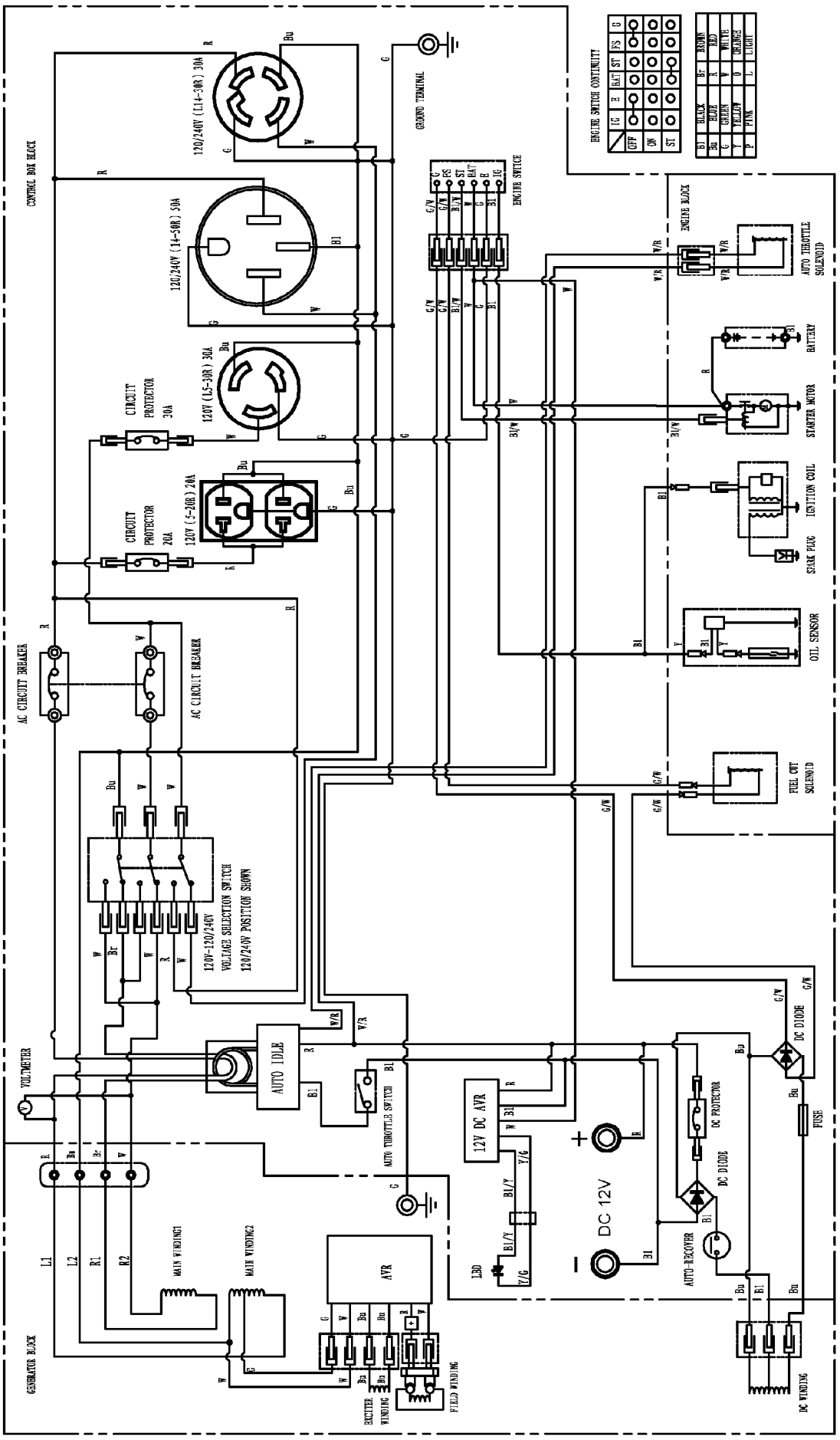
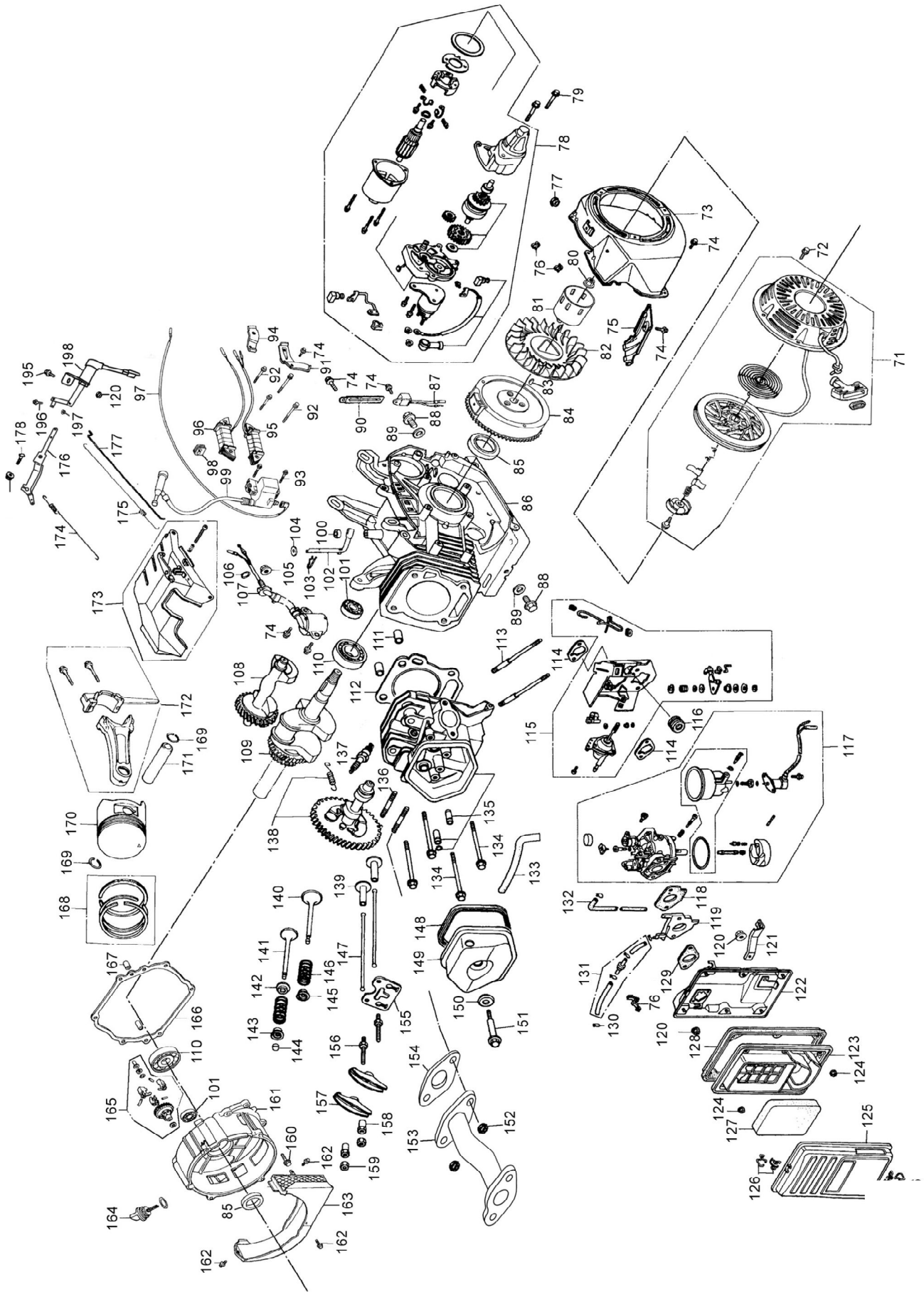

CONTROL BOX BLOCK
120/240V (L14-30R) 30A
120V (L5-30R) 30A
120V (5-20R) 20A
CIRCUIT PROTECTOR 30A
CIRCUIT PROTECTOR 20A
AC CIRCUIT BREAKER
AC CIRCUIT BREAKER
120V-120/240V VOLTAGE SELECTION SWITCH
120/240V POSITION SHOWN
VOLTMETER
AUTO IDLE
AUTO THROTTLE SWITCH
12V DC AVR
DC 12V
L2B
AUTO-RECOVER
DC DIODE
DC DIODE
FUSE
GROUND TERMINAL
ENGINE SWITCH
ENGINE SWITCH CONTINUITY
OFF
ON
IG
B
R/S
ST
FS
G
ENGINE BLOCK
AUTO THROTTLE SOLENOID
BATTERY
STARTER MOTOR
IGNITION COIL
SPARK PLUG
OIL SENSOR
FUEL CUT SOLENOID
DC WINDING
GENERATOR BLOCK
L1
L2
R1
R2
MAIN WINDING1
MAIN WINDING2
AVR
EXCITER WINDING
FIELD WINDING

PD3G10000E

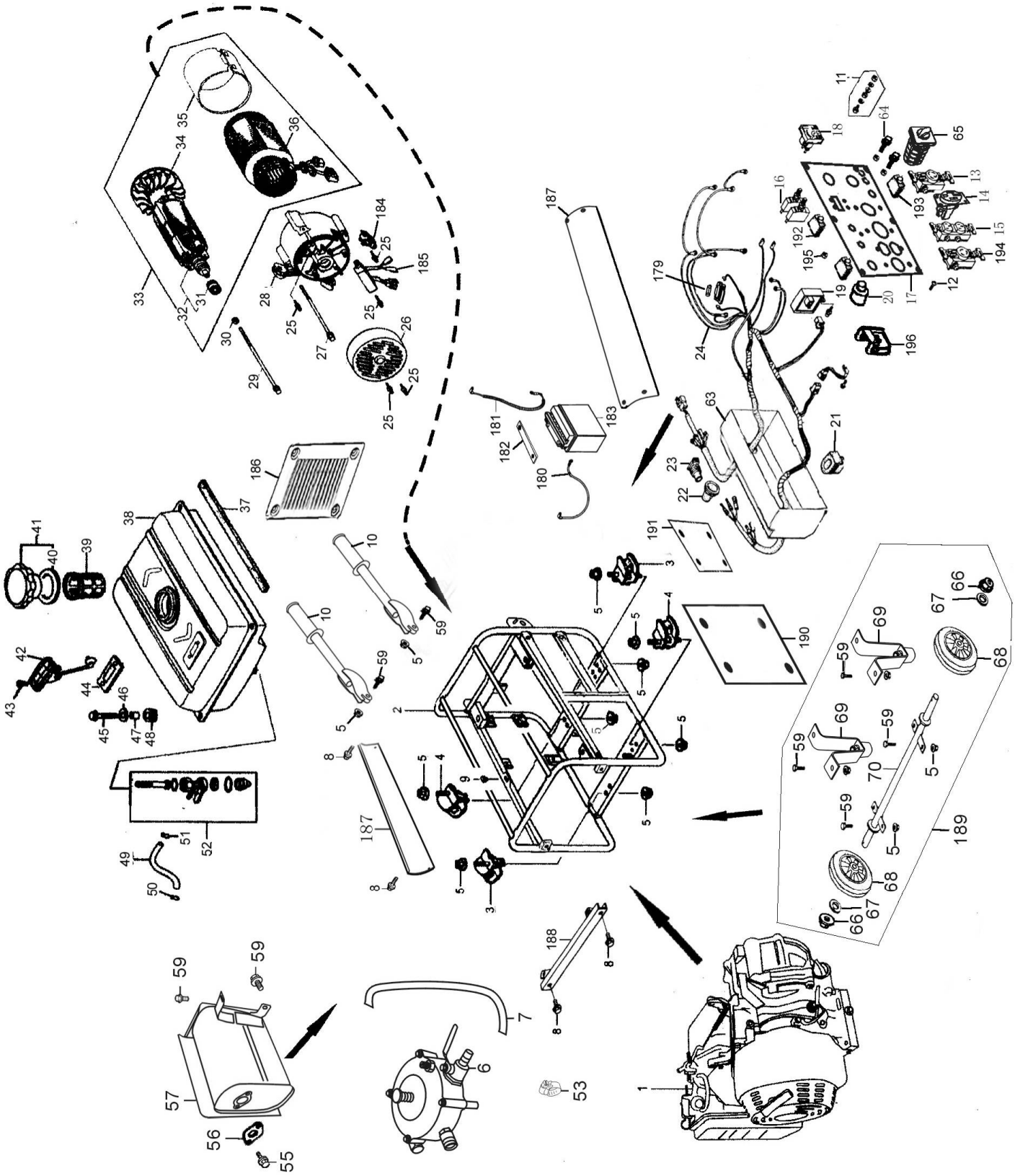

CONTROL BOX BLOCK
GENERATOR BLOCK
ENGINE BLOCK
GROUND TERMINAL
ENGINE SWITCH
ENGINE SWITCH CONTINUITY
120/240V (L14-30R) 30A
120/240V (14-50R) 50A
120V (L5-30R) 30A
120V (5-20R) 20A
CIRCUIT PROTECTOR 30A
CIRCUIT PROTECTOR 20A
AC CIRCUIT BREAKER
AC CIRCUIT BREAKER
120V-120/240V VOLTAGE SELECTION SWITCH 120/240V POSITION SHOWN
VOLTMETER
AUTO IDLE
AUTO THROTTLE SWITCH
12V DC AVR
DC 12V
DC PROTECTOR
DC DIODE
DC DIODE
FUSE
AUTO-RECOVER
L3D
AVR
MAIN WINDING1
MAIN WINDING2
EXCITER WINDING
FIELD WINDING
DC WINDING
AUTO THROTTLE SOLENOID
BATTERY
STARTER MOTOR
IGNITION COIL
SPARK PLUG
OIL SENSOR
FUEL CUT SOLENOID

EXPLODED VIEW AND PARTS LIST



Item	Part	Qty	Description	Item	Part	Qty	Description
71	21100	1	Starter comp, recoil	121	12006	1	Stay, air cleaner
72	GB5787-86	3	Flange bolt M6×8	122	12005	1	Case comp, air cleaner
73	12310	1	Fan, cover comp	123	12004	1	Separator, air cleaner
74	GB5787-86	13	Flange bolt M6×12	124	GB6177-86	6	Flange nut M5
75	19003	1	Shroud comp	125	12007	1	Cover comp, air cleaner
76	12302	3	Clip. Wire darkness	126	12008	2	Clip, air cleaner ware
77	12302	1	Grommet drain hole	127	12003	1	Element, air cleaner
78	21000	1	Start motor	128	12010	1	Seal, air cleaner
79	GB5789-86	2	Flange bolt M8×35	129	23003	1	Packing, insulator
80	GB6177-86	1	Flange nut M16	132	91009	1	Tube, fuel φ45×165
81	19005	1	Pulley, starter	133	12001	1	Tube, breather
82	19001	1	Fan, cooling	134	GB5789-86	4	Flange bolt M10×80
83	GB/T 99-88	1	Key	135	11250	1	Head comp, cylinder
84	81200	1	Flywheel comp	136	11217	2	Bolt head, M8×34
85	12215	2	Oil seal, 35×52×8	137	11202	1	Plug, spark
86	12200	1	Crank case assy.	138	15100	1	Camshaft assy.
87	87500	1	Amplifier	139	15002	2	Lifter, valve
88	12203	2	Bolt, drain lug	140	11208	1	Valve, IN.
89	12217	2	Washer, drain lug	141	11209	1	Valve, EX.
90	87601	1	Clip, wire	142	11216	1	Seat, valve spring
91	GB5789-86	2	Flange bolt M6×25	143	11212	1	Retainer, EX. Valve spring
92	21010	1	Contactor Assy.	144	11213	1	Rotator, valve
97	81102	1	Cord stop switch	145	11211	1	Retainer, IN. Valve spring
98	81103	1	Grommet cord	146	11206	2	Spring, valve
99	81100	1	Coil assy. ignition	147	15001	2	Rod, push
100	12216	1	Oil seal, 8×14×5	148	11241	1	Exhaust piper
101	GB/T276-94	2	Bearing (6202)	149	11240	1	Cover comp, head
102	12208	1	Shaft, governor arm	150	11243	1	Washer comp head cover
103	12212	1	Pin, lock, 10mm	151	11242	1	Bolt, head cover
104	12209	1	Washer, 8.2×17×0.8	152	GB6175-86	2	Nut M8
105	GB6177-86	1	Flange nut M10	153	13200	1	Pipe comp EX.
106	12221	1	O-ring,14mm	154	13202	1	Casket (B) EX. Pipe
107	12200	1	Switch assy. oil level	155	11215	1	Plate, push rod guide
108	13200	1	Weight, balancer	156	11214	2	Bolt, pivot
109	13000	1	Crankshaft comp	157	11205	2	Arm, valve rocker
110	GB/T276-94	2	Bearing (6207)	158	11204	2	Nut, Arm, valve rocker
111	12220	2	Pin, dowel, 12×20	159	11206	2	Nut, pivot adjusting
112	11219	1	Casket, cylinder head	160	GB5789-86	7	Flange bolt M8×40
113	11218	2	Bolt head, 8×106	161	12100	1	Crankcase cov
114	23008	2	Packing, air cleaner	162	GB5789-86	3	Flange bolt M5
117	23000	1	Mixer	163	12301	1	Fan cover
118	23002	1	Packing, carburetor	164	121102	1	Cap assy. oil fi
119	23001	1	Insulator, carburetor	165	12230	1	Governor kit

120	GB6177-86	5	Flange nut M6	166	12214	1	Packing, case cover
167	12213	2	Pin, dowel, 8×12	176	17004	1	Arm, governor
168	13100	1	Ping set assy. piston	177	17003	1	Rod, governor
169	13105	2	Clip, piston pin	178	17005	1	Bolt, governor arm
170	13101	1	Piston	195	GB5787-86	1	Flange bolt M6×30
171	13104	1	Pin, piston	196	GB5787-86	1	Flange bolt M3×8
172	13106	1	Connecting rod assy.	197	GB6175-86	1	Nut M3
173	17220	1	Control assy.	198	17006	1	solenoid valve combination
174	17001	1	Spring, governor				
175	17002	1	Spring, throttle return				



Item	Part	Qty	Description	Item	Part	Qty	Description
1		1	Gasoline engine	41	14300	1	Fuel filler cap comp
2	15100	1	Frame comp	42	14400	1	Fuel sensor
3	15002	2	Bottom rubber A	43	GB 819-95	2	Screw M5 × 10
4	15003	2	Bottom rubber B	44	14410	1	Casket fuel tank
5	GB6177-86	16	Flange nut M8	45	GB5787-86	4	Flange bolt M6 × 22
6	32000	1	Reducer assy.	46	14022	4	Washer
7	32004	1	Intake hose	47	14005	4	Collar
8	GB5787-86	24	Bolt M6 × 12	48	14001	4	Cushion
9	15001	2	Rubber pad, frame	49	14004	1	Outlet pipe ϕ4.5 × 165
10	15201	2	Hand push	50	14006	2	Tube clip
11	11010	1	Earth terminal set	51	14003	1	Rubber, fuel tube
12	GB5787-86	8	Flange bolt M6 × 12	52	14100	1	Fuel cock
13	11070	1	Receptacles (30A)	53	32001	2	Clip
14	11073	1	Receptacles (50A)	55	GB5787-86	2	Flange bolt M8 × 32
15	11072	1	Receptacles (20A)	56	13010	1	Muffler stay
16	11120	2	Circuit Breaker	57	13020	1	Muffler
17	11090	1	Control panel	59	GB5789-86	10	Flange bolt M8 × 16
18	11110	1	LED smart meter	64	11101	2	DC output post
19	11050	2	Diode assay	65	11105	1	Voltage selection switch
20	11082	1	Engine switch	66	GB6177-86	2	Flange nut M12
21	11040	1	Boot, switch wire	67	GB97.1-85	2	Washer ϕ20
22	11030	1	Boot, main wire harness	68	21040	2	Wheel comp
23	11010	1	Boot, AC output wire	69	21020	2	Bracket
24	11060	1	Wire harness Assy.	70	21010	1	Axle
25	GB5787-86	5	Flange bolt M5 × 12	179	11096	1	Fuse(5A)
26	16004	1	Generator end cover	180	22001	1	Positive wire of battery
27	GB5789-86	4	Flange bolt M6 × 200	181	22002	1	Negative wire of battery
28	16003	1	Support stand	182	22005	1	Battery cover
29	GB5789-86	1	Bolt M10 × 1.25 × 290	183	22010	1	Battery
30	GB9701-85	1	Plain washer ϕ10	184	11070	1	Brush assy.
31	GB276-89	1	Bearing 6207-2RS	185	11080	1	Voltage regulator
32	16200	1	Rotor comp	186	15010	1	Protector frame side
33	16000	1	Stator & Rotor Assy.	187	15011	2	Frame cover
34	16005	1	Generator fan	188	15102	1	Frame comp，side
35	16101	1	Stator cover	189	21000	1	Wheel Assembly
36	16100	1	Stator Assy.	190	15012	1	Protector panel side
37	14201	1	Stripe, fuel tank	191	15013	1	Protector Battery side
38	14200	1	Fuel tank	192	11193	1	AC protector
39	14302	1	Fuel filter	193	11195	1	DC protector (10A)
40	14303	1	Packing ring	194	11071	1	Receptacles (30A)

Return Policy:

Our return policy gives you 30 days from the shipping date to return any product, provided it's new, unused, and in the original packaging as received or defective.

We will only pay the return shipping if the return is a direct result of our error (you received an incorrect item, defective item or shipping damaged product) and re-ship the correct item at no charge.

IMPORTANT: For tri fuel and NG generator all customers must check NG pressure before purchase which has to be minimum 0.25PSI or 6" water column. If you find that at a later date you can not run the unit in your area due to insufficient NG pressure and plumber or gas company not available to set up your unit you will NOT be able to return the unit NO EXCEPTIONS.

IMPORTANT: All customers must check your altitude before purchasing any Powerland generator unit which will not operate normally if the altitude is above 3000 feet. If you find that you are not able to run the unit after receiving it due to altitude above 3000 feet and you did not check your altitude before purchase you will NOT be able to return the unit NO EXCEPTIONS.

Factory Warranty:

Powerland items carry a 1-year limited parts warranty. If, under the course of normal operation, the Powerland item fails within 1 year from the date of purchase as a result of faulty materials or workmanship, Powerland will provide necessary replacement or repair parts at no charge for the parts. Labor costs are not included under this warranty policy and are the responsibility of the buyer. This warranty does not cover failure due to normal wear and tear or abuse. This warranty applies only to purchases made directly with Powerland and its authorized distributors. This warranty is void with misapplication, misuse, or negligence of the product.
Special Note: all battery in the generator will only have 3 month warranty from the date of receiving the generator.